

# AMERICAN FORESTS *and* FOREST LIFE



OCTOBER, 1924

STRANGERS IN THE COVER : MOTOR CAMPING  
CONSERVATION AND THE PUBLIC

VOL. 30 No. 370

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# The American Forestry Association

Washington, D. C.

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FOREST RECREATION as a growing need in the social development of the nation; the PROTECTION OF FISH AND GAME and other forms of wild life, under sound game laws; the ESTABLISHMENT OF FEDERAL AND STATE GAME PRESERVES and public shooting grounds; STATE AND NATIONAL PARKS and monuments where needed, to protect and perpetuate forest areas and objects of outstanding value; the conservation of America's WILD FLORA and FAUNA.

The EDUCATION OF THE PUBLIC, especially school children, in respect to our forests and our forest needs; a more aggressive policy of RESEARCH AND EDUCATIONAL EXTENSION in the science of forest production, management, and utilization, by the nation, individual states, and agricultural colleges; reforms in present methods of FOREST TAXATION, to the end that timber may be fairly taxed and the growing of timber crops increased.

# AMERICAN FORESTS AND FOREST LIFE

(Formerly American Forestry)

THE MAGAZINE OF THE AMERICAN FORESTRY ASSOCIATION

WASHINGTON, D. C.

OVID M. BUTLER, Editor

L. M. CROMELIN, Assistant Editor

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Member A. B. C.

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# AMERICAN FORESTS

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## THE PUBLIC ATTITUDE TOWARD CONSERVATION

BY WALTER M. MOORE

MANY questions involving national policy have been brought to the attention of the public—and that means all of us—during the past fifty years. Some of these matters have been definitely settled, and with such finality that they are no longer discussed, for there is nothing more to be said. There is the parcel post, for example. It required a hard fight to put it over, but, now that it is actually in operation, no one doubts its value as a permanent institution. Other questions died a natural death; for example, free silver, which provoked many a stormy session, in and out of Congress. Its alleged merits were brought to the attention of every one with great persistency, yet it somehow did not take hold, and its leading advocate long ago admitted that it was a dead issue. Some public questions, apparently of national interest, prove to be merely clever catch-phrases; others are of such fundamental importance that they cannot be kept down until they are settled, and settled right.

Is "conservation" merely a catchword, or does it really mean something to us as Americans? It was first prominently brought forth as a national question some sixteen years ago by Gifford Pinchot and Theodore Roosevelt. At the first Conference of Governors at the White House, the whole problem was so forcefully presented to those in attendance and so widely circulated by the press that it at once took its place as a national issue. We were shown that our well-being, our happiness, our prosperity as individuals, our economic existence as a nation, was very largely dependent upon the perpetuation and wise use of the soil, the forests, the waters, the minerals, and the other natural resources of the United States.

Some years later the necessity of conserving our resources was overshadowed by other things of greater

immediate urgency. Chief among these was the World War; yet, as the war continued, it was found that the natural resources were of supreme importance.

At the present time it is apparent that public interest in this great question is by no means dead; the increasing amount of attention that is given to it and the constructive work actually accomplished give us a hint of what may be expected in the future.

"Straws show which way the wind blows." A great daily newspaper published in the middle west, prints every day, at the head of its editorial page, its "Program For America," in which two of the seven planks are:

Develop a nation-wide superpower system.

Regrow our vanished forests.

These are the two major planks in the platform of the advocates of conservation.

Editorial opinion, as expressed in newspapers and magazines throughout the country, is, generally speaking, supporting these two propositions—superpower and forestry. Publications that do not support them are at least bringing them to our attention. In fact one can scarcely pick up a newspaper or a magazine without reading a conservation problem, often, it is true, with a little advertising for some individual thrown in.

Knowing that our enduring prosperity as a nation depends upon the provident use of our natural resources—coal, forests, soil, and water—shall we, by abandoning the priceless heritage of the ballot, apathetically turn all stewardship over to the political "Georges"; or, by exercising the right of citizenship, which our fathers fought to bequeath us, shall we have a voice in saying what manner of nation shall be left to our children? Less than 50 per cent of qualified American voters are now exercising their franchise, even in presidential elections. Conservation is not a catchword. It is a public issue, no less vital to our children than was the right of political freedom to the children of the men and women of '76,

A small proportion of the people only actually express definite opinions on the subject of conservation. Most of us are so busy at our jobs or are so engrossed in making a living that we leave our thinking to others. Only 8 to 10 per cent of the qualified voters take part in a primary election, though the result of such a primary may affect us in many ways. Voting costs us no money and but little time or effort; yet about 92 per cent of us are willing to let a small minority select the candi-

dates, and many voters do not even go to the polls at the presidential elections.

The majority of people are good citizens, in the sense that they are industrious, pay their debts, and mind their own business; but they are apathetic on public questions. "Of men there are aplenty; of leaders, few." The interest in conservation is not shown by those who take no interest in anything (aside from their own work and pleasures), but by those who are permitted by the majority to become leaders in thought and in action. Millions of people never read a book and rarely read more than the headlines of newspapers; it is not surprising that millions are not actively interested in conservation.

Yet, after all, the average American is a rather shrewd individual. As Abraham Lincoln said, "The Lord must love the common people, for he made so many of them." The wonderfully dynamic editor of the *American Magazine*, who was affectionately known as "Sid" and whose death was mourned by thousands, said: "The American people have a sixth sense for detecting bunk," whether in business transactions, in politics, in religion, or in any other activity. The American people, when they think about it at all, are beginning to realize that our resources are not as inexhaustible as was once believed; that we should not burn our forests like spendthrifts; that some of our resources can be destroyed or rendered useless by unwise exploitation. Public opinion is reflected in congressional action, and the report of the Senate Committee on Reforestation shows that the leaders in the Senate are keenly alive to the necessity for the prompt establishment of a national forest policy. The comments in the newspapers and magazines on the work of the committee are almost uniformly favorable and show how deeply the question of reforestation has taken root.

Various states have set up departments of conservation, conservation commissions, and the like; their duties vary widely, which is to be expected, as there is great diversity in the resources of the several states. The Methodist Episcopal Church has appointed a "Committee on Conservation and Advance," which shows how the word "conservation" has made a peculiarly effective appeal, though this committee is in no way interested in natural resources, but rather in missionary activities.

Nearly all those who have given serious thought to these matters now realize that our forest resources are deserving of especial attention. For example, Senator George H. Moses, of New Hampshire, in an address at the last annual meeting of the American Forestry Association, said: "Our forests and our timber supply constitute the most widespread of all the economic problems likely to confront this country in this generation."

Conservation Commissioner Macdonald, of New York State, in commenting on Governor Smith's proclamation setting apart Conservation Week in March, 1924, said:

"There is no more important problem before the American people today than the conservation of our natural resources. The conservation of our forests in particular is of vital importance to the health and well-being of all of us.

"Once considered inexhaustible, our forest resources, through waste and unscientific use, with no intelligent policy of replacement, have been diminished to the point where it is incumbent upon us to conserve what is left and replace with planted forests the natural growth of our hills and valleys with which this state was once so abundantly endowed. The carelessness and prodigality that swept off our forests and reduced the wild life of our fields and streams must give place to a policy of restoration and intelligent use.

"Today New York State has a definite policy of forest replacement, to which more and more citizens are giving their active support each year, as the need of lumber and wood and the profits to be derived from planted forests under scientific management become known to them. Already the steps taken to check the wasting of our forests by fire and disease are beginning to show results, and the conservation of the wild life of our forests and streams is receiving more intelligent consideration."

Mr. John W. Blodgett, the president of the National Lumber Manufacturers' Association, in an address at the annual meeting of the American Society of Mechanical Engineers, said:

"The problem of reforestation in order to maintain a perpetual timber supply for the people of the United States is one whose solution is, perhaps, as urgent as any that confronts this country today. While dealing, as it does, with the continuous supply of a commodity whose use is universal, and which enters into every field of our commercial, industrial, and even social existence, it is, strange to say, one of the least clamorous.

"The danger of neglecting it is an insidious one and lies in the fact that there is little in today's conditions to cause present inconvenience.

"If the engineers of this country can eliminate obvious waste and perfect the methods of protection and utilization of wood, it will be equivalent to planting and keeping in continuous production 170,000,000 acres of forest land. Is the task worthy of your notice? Present conditions are a challenge to every drop of professional fighting blood in your veins."

If there is any "bunk" in these statements the public has not detected it.

A few years ago the interlocking of power systems and the consolidation of power companies were looked upon as sinister developments, boding evil to the country. A more enlightened viewpoint now prevails. It is now understood that the economies of investment and operation secured by the pooling of power are very great, and the ease with which power may be distributed to points where it is most needed makes a power shortage less likely in any locality. Electric power must be continuous, and the industries of a city should not be menaced by a shut-down on account of low water (or coal shortage) at the powerhouse. The combining of power systems by transmission lines is as beneficial to the consumers as it is to the power companies.

Interest in the superpower question is, indeed, not confined to the United States. The idea has spread around



PLENTY OF ROOM IS ASSURED FOR THE COMPLETE ENJOYMENT OF MOTOR CAMPING

## Club Connections for Motor Campers

*With the Great Outdoors for Club Rooms, Members of a Novel Organization Can Meet and Be the Guests of Nature*

BY HARRY IRVING SHUMWAY

THERE are two ways to go motor camping. The first method is in the manner of an adventure; you start out on the broad highway, pursue a sort of will-o'-the-wisp course, and when night comes scuttle for a camp site. Maybe you are lucky and strike a good spot—and sometimes you are not so fortunate. It is a sort of game and appeals to the man of sportive spirit; he rather likes the unscheduled and uncharted flavor of it.

The other method is more conservative and, while it may lack the thrills of the first one, it offers a safety-first idea which has an appeal to the less intrepid. The traveler following this course knows where he is going to pitch a tent in advance, knows that he won't have to sleep standing up, and knows that he won't have to keep driving all night. He sticks to a certain route, aims for a certain town, and when he gets there all he has to do is to drive in and begin housekeeping.

Once upon a time this former manner of camping with the car held an allure that could not be denied. It was like blazing new trails; one felt like a pioneer, regardless of what he may have looked like. Blithely you left your friends (they used to see you off then) as a crusader. Pressed as to your destination or destinations, you waved

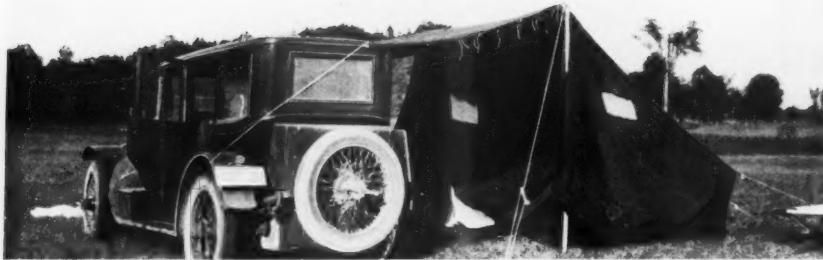
your hand airily and replied, "Oh, no place in particular. We'll just drive until we get sick of it, and then turn off the road and set up a tent and turn in. That's all there'll be to it." And, really, that was about all there was to it. A few years ago a motor camper could practically pitch a tent anywhere in the country districts, providing



SOME OF THESE MODERN "CLUB ROOMS" ARE LOCATED IN HAYFIELDS, WITH SPRING WATER, MILK AND EGGS AND BUTTER FOR SALE AT THE ADJOINING FARM

he looked and acted decently and asked permission.

But now it is different—and becoming more different. Where campers have been, sometimes those coming after are not welcome. We who follow the road have to admit (and sadly) that many motorists have little regard for the



AN OUTDOOR DORMITORY, IN WHICH THE MOTOR CAR IS AN ACCESSORY AFTER THE FACT, AT ONE OF THE CAMPS OF THE NATIONAL RECREATION CLUB OF BOSTON

rights of others. There are those who seem to think the landscape is only something to whiz through and treat as a waste barrel. These people have spoiled the sport for others more law-abiding. They are the ones who are responsible for the many new signs going up in the beauty spots of Nature, reading: "Campers Not Wanted." There is one little town in Massachusetts, just one little town, which keeps five auto trucks busy picking up debris from the roadside which campers and picnickers leave.

So nowadays the motor camper finds he is a little bit up against it. He discovers he is not so welcome as he once was. Of course, this is only noticed by the man who likes to find his own camp and asks as he goes along; the man who patronizes public camping grounds doesn't mind. But there are many tourists who don't care for the large public grounds; they prefer to get into the more unfrequented spots—on farms, in the woodlands, and by the streams—and it is for this type of camper that an organization in Boston has worked out an attractive scheme.

Here is what the National Recreation Club of Boston stands for:

"The objects of the club are protection and conservation of forests, flowers, and birds; to promote recreation in all forms, particularly out of doors; and to establish and maintain automobile camping grounds, club houses, recreation centers, and bird sanctuaries throughout the country. The club shall not be conducted for profit."

The yearly dues are five dollars, and upon payment of this the member is given a membership ticket with twenty fifty-cent coupons. One of these

tickets and fifty cents entitles the holder and his family to camp one day at any of the National Recreation Club camps. He is also given a complete list of the camps in New England where the club operates, with a road map. Each of these camps is described to the last detail, an item which will appeal as a godsend to the man looking for a camp. Here is a sample of how they read:

LANESBORO, MASSACHUSETTS

Prospect Hill Farm, Wm. A. Akeroyd, owner.

Post-office address, Lanesboro, Box No. 43.

Express address, Pittsfield.

Telephone, Pittsfield 706-23.

Size of lot, about 30 acres.

Hayfield.

One-fourth mile to Route No. 4.

Approach, dirt road, good.

To railroad station, 5 miles.

Name, Pittsfield, on New York and New Haven.

To B. & A. R. R. station, 2 miles.

Name, Berkshire.

Distance to stores, one-fourth mile.

Water for drinking, spring.

Bathing, Lake Pontoosuc, 2 miles.

Owner will sell at house, milk, eggs, butter, fruit and vegetables; poultry dressed to order.

Camp is on a hill one-fourth mile from center of village. Look for the N. R. C. Camp sign.

The camp is on a 50-acre field, with a charming view of the mountains and Pontoosuc Lake, 2 miles distant. For the vacation camper the pastures beyond the hayfield furnish any degree of wildness that may be desired.



ALL THE COMFORTS OF A HOME WITH ALL THE CHARM OF THE OUTDOORS, AND NO CHANCE OF BEING CROWDED, ARE GUARANTEED THE CAMPER



That is, in brief, how the simple scheme works. And a glance at the map will show how well the several states in this group have been camp-charted. You can drive on any of the main roads with the assurance of always finding a fine place to spend the night.

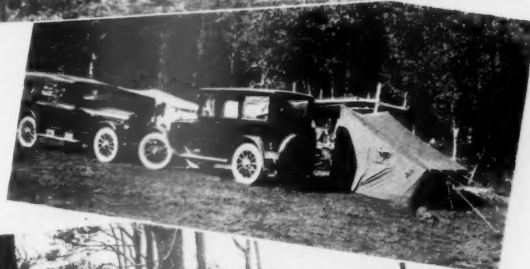
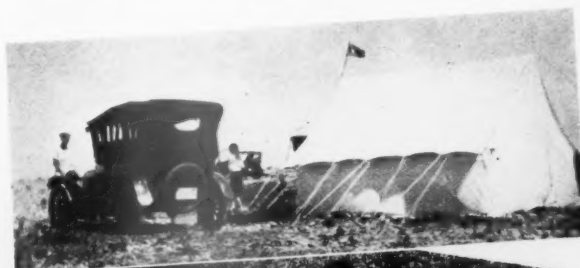
The guiding spirit in this splendid movement is Mr. Walter H. Woods, a thorough outdoorsman and an ardent motor camper. He has selected these camps by the simple but conclusive process of going out and finding them and actually camping upon them, testing each one. The speedometer on his car, which was used this year in locating camps, registered 8,000 miles for eighty camps. Mr. Woods has been able to get the best possible locations through the help of the local chambers of commerce, generally driving about the desired areas with a member of that body who was a farm salesman and who knew the country. Two of the requisites of every camp are that they must be attractive and healthful.

The camps are located in such a way that the genuine and diversified beauties of old New England can be sampled to the full. The seashores of Cape Cod and Cape Ann, with their miles of enchanting scenery; the mountains of New Hampshire and Vermont, the Connecticut River valley, the Berkshires—there is a camp to be found in each of these. A particularly attractive feature is the fact that every camping party is allotted one-quarter of an acre. As anybody knows who has traveled much, this is an unusually generous slice of earth. Some of the public camp grounds give only a few square feet, just enough to move about on. Some idea of the territory at the disposal of the members can be had when it is known that the total space in grounds is 25,000 acres. The smallest ground of all is 10 acres; and from that they go up to 400 acres.

New camps are being added from time to time, so that those who are at it six or seven months in the year need not repeat on a camp site unless they want to. It is also planned to establish recreation centers with a central building, where the members can meet, get their meals, and live near by in their own tents.

All of these grounds are privately owned, with the single exception of a tract of 12 acres in the National Forest, New Hampshire, that being a grant from the United States Government. They have the advantages of natural woods and fields, with the security coming from proximity to the owners. There are instances where the public camping ground leaves something to be desired; and here is where the National Recreation Club camps are different.

The camps are well posted with signs, 18 by 24 inches, of bright yellow, with black letters "N. R. C. Camp" and an arrow indicating the direction for the tourist to follow. Another feature is the location; they have been chosen for some natural advantage, always having in mind that the camper desires to be away from curious eyes; and for that reason most of them are just off from the automobile road, that the campers may be away from the noise and dust of travel. The land is always well drained and firm enough to permit cars being driven on it.



SNAPSHOTS OF MANY HAPPY GYPSIES WHO HAVE MADE RESERVATIONS AT OUTDOOR CLUB ROOMS. IN THE COURSE OF AN INSPECTION TRIP OF THE CAMPS, ALMOST EVERY VARIETY OF CAMPING EQUIPMENT—AND THERE ARE MANY AVAILABLE TODAY FOR THE COMFORT OF THE CAMPER—WAS SEEN IN ACTIVE SERVICE

Camping through a section containing such camps has decided advantages. The business man can easily plot a journey from the map and still be in touch with his store or office. As nearly every camp can be reached by telephone, he can leave behind him the addresses and telephone numbers of the places he intends to visit.

That these camps are somewhat different from the cut-and-dried commercial affairs one may learn from the following letter, which is similar to many others received by the club. It is given in part:

"MY DEAR MR. WOODS:

"I am of the opinion that you are laying the foundation for what will some day be a very large and useful organization. The camp sites I have seen so far exert a strong pull to stay more than the usual one night.

"The coming week I am taking some Boy Scouts, in whom I am interested, to spend several days at one of the camps. I took a few of them down to another of the N. R. C. camps on the Cape early in the season and had a fine camp, being well taken care of by the owners.

"The boys are interested in nature study, some of them having rather substantial bird lists. It occurred to me they might be permitted to do a good turn by building some bird-houses during the winter for some of the camps.

"I believe the Conservation of Wild Life feature is very

important and elevates the club above the level of mere pleasure-seeking.

"Cordially yours,

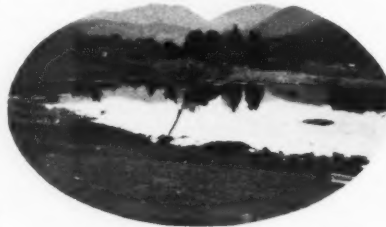
— — —."

The tourist certainly likes to travel and stop where he is welcome. Nobody cares to be turned down when

he asks for permission to pitch a tent. On the other hand, the land-owner can reasonably look with suspicion on so many visitors on wheels, especially after he has had an unpleasant session with the undesirable kind of camper. The man coming to him with a membership in a club with which he is familiar is a

voucher to the farmer that his property will not be harmed. It results nearly always in mutual profit, as the camper buys farm products wherever he goes—and in no inconsiderable quantity.

It would seem that this idea might be followed with profit in other sections of the country. It is a happy medium between the oftentimes crowded public camping ground and the haphazard method of going it blind, depending on luck to find a spot for the night. And with our motor camping enthusiasts growing by the hundreds of thousands, we cannot have too many.



## GOD'S EVERYWHERE

By Arnold Andrews

THE great white breakers lift their tops in curling foam  
And fling them far upon the clean white sand;  
With white sails full a fishing sloop comes home,  
While, circling high, a gull drifts toward the land.  
And God is there.

The perfumes of wild flowers greet the passer-by;  
In shady pools the babbling brook in quiet rests  
Beneath green trees that lift their branches high,  
While birds sing sweetly near their nests.  
And God is there.

When whispering night comes stealing from afar  
The great, round moon looks down so cold and proud,  
And 'cross the spangled splendor, star by star,  
There gently drifts a soft and fleecy cloud.  
And God is there.

# FORESTRY AND RECREATION

BY L. F. KNEIPP

*Executive Secretary, National Conference on Outdoor Recreation*

AFTER twenty years of unceasing effort, the foresters of the United States thought they had reached a point where they could turn with a strange feeling of tranquillity to their real and only love, the practice of the gentle art of silviculture. After years of troubled discussion, public sentiment has turned from an attitude of indifference, verging on opposition, to one of favor and support. Hostile legislative bodies, both Federal and state, have been succeeded by more friendly ones. Pitifully inadequate appropriations have grown to sums of at least partial sufficiency. Inappropriate laws have given way to more enlightened statutes, which, if not wholly satisfactory, at least mark long strides toward what is desirable. Hope dawned in each forester's mind that at last the work of growing timber to meet the nation's needs could receive undivided attention.

But, alas! man only proposes. The forests having been made reasonably safe for democracy, that same democracy now seems determined to dedicate them to a new form of service—that of outdoor recreation. And so new problems confront the forester; new demands are being made upon his technique and practical judgment.

Superficially, they may appear to be mainly problems of the comely flapper; of the adolescent smart-aleck, careless of his cigarette butts, his rifle bullets, and his camp refuse; of the querulous adult, who demands the reservation of unreasonable quantities of forage for his saddle and pack horses, of unreasonable quantities of timber for the gratification of his eye, of unreasonable areas of land for the site of his summer shack. But these are the simple, the insignificant, aspects of the problem.

The big aspect is the development of a new factor of land service in the problem of forest-land management—a factor which will necessitate many departures from principles of forest-land management based solely on the objective of timber production. It will, in many cases, require the leaving, instead of the cutting, of ripe timber; the calculation of growth returns in terms of intangible quantities of human service rather than in terms of board, lineal, or cubic feet, or cords.

Another big aspect is that of the more complex forms of treatment and management which must be introduced into plans of forest administration. The practice hitherto has been to cut with an eye to utilization rather than landscape effect; to build roads to get the timber out rather than to best develop the inherent scenic qualities of the area. In the future this practice must, in many cases, be modified.

But why not? The public must, of course, pay for these changes, if they are to enjoy them; consequently the economic phase of the situation will take care of itself. The

public has a right to demand, and ultimately will demand, that every acre of land shall be made to yield the maximum return in human happiness and progress. If a given area will produce a greater combined return in timber and recreation than it will in timber alone, should it not be managed on the principle of combined use? Forestry, after all, is merely a phase of scientific land management.

Our growing population is going to require an increasing degree of outdoor play for the preservation of its ideals and its social vitality. Our land resources are insufficient to permit the dedication to exclusive recreational use of anything like an acreage which will be needed. These needs must, therefore, be satisfied, in large measure, by a correlation of recreation with other forms of land service.

There is no other form of land service with which recreation can be so well combined as that of forestry, which by its very nature creates the elements essential for wholesome outdoor play. The most conspicuous and recent recognition of this fact was by the National Conference on Outdoor Recreation, which met in Washington last May at the call of President Coolidge. A casual review of the proceedings of the conference rather convincingly demonstrates that the 312 delegates, who represented the 128 organizations participating in the conference, were practically of one mind in the thought that the forests of the country are destined largely to supply the outdoor recreation needs of the future and should be managed accordingly. At the Fourth National Conference on State Parks, which met immediately afterwards, at Gettysburg, the same thought largely prevailed, and the conference adopted a resolution urging the forest schools of the country to include courses on recreation management in their curricula.

So it's now up to the foresters and to the schools in which foresters secure their technical training. With the inevitability of a natural law, the people of the United States are going to turn to the forests, in numbers increasing progressively with each passing year, to share in the delights of the forest and to view with deploring eyes, or perhaps angry and active antagonism, forms of timber utilization which unnecessarily devastate the esthetic features of the forest. What will the foresters do about it? Will they stand pat on time-honored principles of American timber production, or will they, like their European brethren, work with their public to bring about a reasonable balance between the spiritual and material forms of forest service, and then shape their plans to the standards established, even though to do so may compel the employment of the landscape architect and the park administrator side by side with the silviculturist?

Camping through a section containing such camps has decided advantages. The business man can easily plot a journey from the map and still be in touch with his store or office. As nearly every camp can be reached by telephone, he can leave behind him the addresses and telephone numbers of the places he intends to visit.

That these camps are somewhat different from the cut-and-dried commercial affairs one may learn from the following letter, which is similar to many others received by the club. It is given in part:

"MY DEAR MR. WOODS:

"I am of the opinion that you are laying the foundation for what will some day be a very large and useful organization. The camp sites I have seen so far exert a strong pull to stay more than the usual one night.

"The coming week I am taking some Boy Scouts, in whom I am interested, to spend several days at one of the camps. I took a few of them down to another of the N. R. C. camps on the Cape early in the season and had a fine camp, being well taken care of by the owners.

"The boys are interested in nature study, some of them having rather substantial bird lists. It occurred to me they might be permitted to do a good turn by building some bird-houses during the winter for some of the camps.

"I believe the Conservation of Wild Life feature is very

important and elevates the club above the level of mere pleasure-seeking.

"Cordially yours,

— — — — —"

The tourist certainly likes to travel and stop where he is welcome. Nobody cares to be turned down when he asks for permission to pitch a tent. On the other hand, the land-owner can reasonably look with suspicion on so many visitors on wheels, especially after he has had an unpleasant session with the undesirable kind of camper. The man coming to him with a membership in a club with which he is familiar is a voucher to the farmer that his property will not be harmed. It results nearly always in mutual profit, as the camper buys farm products wherever he goes—and in no inconsiderable quantity.

It would seem that this idea might be followed with profit in other sections of the country. It is a happy medium between the oftentimes crowded public camping ground and the haphazard method of going it blind, depending on luck to find a spot for the night. And with our motor camping enthusiasts growing by the hundreds of thousands, we cannot have too many.



## GOD'S EVERYWHERE

By Arnold Andrews

THE great white breakers lift their tops in curling foam  
And fling them far upon the clean white sand;  
With white sails full a fishing sloop comes home,  
While, circling high, a gull drifts toward the land.  
And God is there.

The perfumes of wild flowers greet the passer-by;  
In shady pools the babbling brook in quiet rests  
Beneath green trees that lift their branches high,  
While birds sing sweetly near their nests.  
And God is there.

When whispering night comes stealing from afar  
The great, round moon looks down so cold and proud,  
And 'cross the spangled splendor, star by star,  
There gently drifts a soft and fleecy cloud.  
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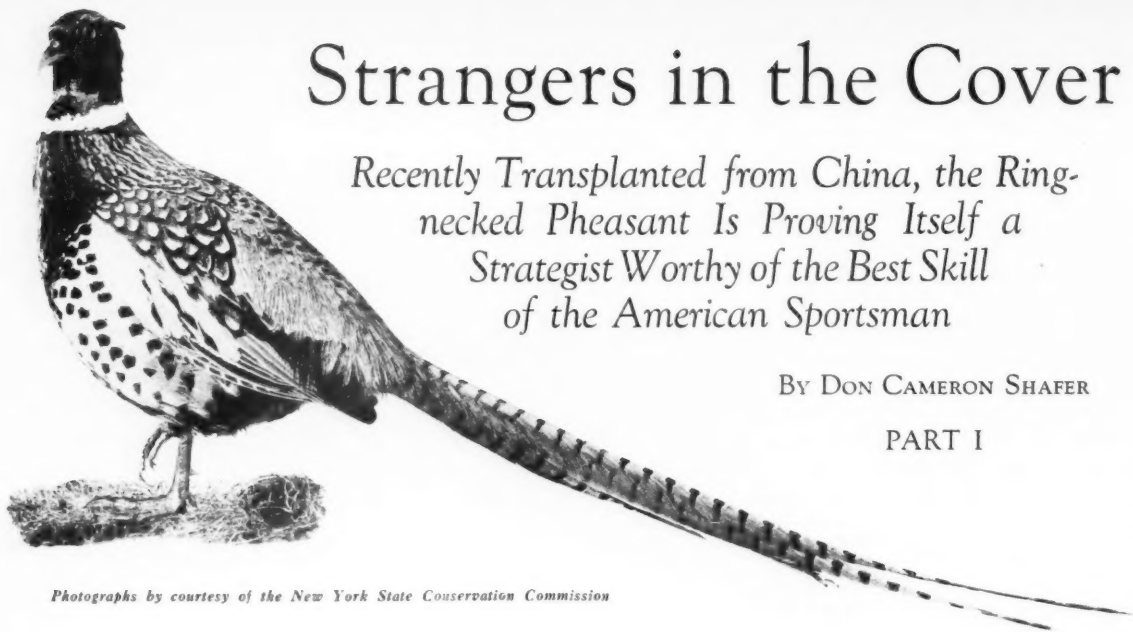
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# Strangers in the Cover

*Recently Transplanted from China, the Ring-necked Pheasant Is Proving Itself a Strategist Worthy of the Best Skill of the American Sportsman*

By DON CAMERON SHAFER

## PART I

*Photographs by courtesy of the New York State Conservation Commission*

IT WAS midday in late October; a crisp, motionless air, bright with sunshine, in which still lingered something of the warmth of summer. In the matted hedgerows, the bushy natural hollows, where playful winds had dropped armsful of fallen leaves, bright autumnal colors were fast fading to pale yellows and more sober browns. Here and there the rich black earth showed in long, even corrugations, where the fall plowing had been accomplished. In the distance the harvested fields were tented with corn shocks. Now was our valley resting after another rich harvest, in its sober brown sleeping garment, drowsily awaiting the white quilts of approaching winter.

In the thin, weedy brush, at the edge of the stubble field, something moved ever so slightly. And yet I could distinguish nothing—no moving thing, no single shape that I could identify as bird or beast. Something had moved in there but a minute before—or else my eyes were already playing tricks with fancy.

And then, as I sat there in the warm sun beneath the big butternut, watching intently, four beautiful strangers, birds the size of barnyard fowls, suddenly walked slowly and majestically into the open. They were birds as large

as Leghorn roosters, in dazzling array of brilliant colors, and I had failed to see them in a thin screen of cover. Surely an oculist had work to do here!

For a minute the four birds stood at attention, tall and alert and beautiful beyond belief, scanning with bright eyes the wide sweep of the fields, the few naked trees and the bright sky above; then they moved

slowly forward and began to glean the scattered grain from the wheat stubble. They were

Chinese, or ring-neck, pheasants—strangers in

our cover. Four majestic birds, three cocks and a hen, worthy of a mandarin's garden, in a New York State stubble field!

Words cannot adequately describe these beautiful birds. No artist could reproduce in

artificial colors the true glory of a big cock standing in bright sunlight. The largest

of the three cocks before me, he of the lighter plumage, stood nearly two feet high, long of limb and neck, weighing fully four pounds. Proudly he carried his

two feet of long tail, now folded so carefully, barred every inch with dark bands. Breasts and shoulders were a light iridescent bronze, each feather tipped with black, a violet sheen discernible in the sunshine like the play of light on



A GROUP OF THE ASIATIC STRANGERS WHO HAVE MADE THEMSELVES THOROUGHLY AT HOME IN OUR COVER, TO THE DELIGHT OF OUR NATIVE SPORTSMEN

certain changeable silks. The back feathers above the shoulders were of a lighter bronze-brown, eyed with gray, and a greenish "shawl" of longer-eyed feathers covered the lower back and the base of the heavy tail. The strong wings, held tight to the muscular breast, were a light gray. Head and neck were a dark metallic green, glistening, with a pure white collar, half an inch wide, just above the shoulders, but not quite connecting in front. There was a brilliant, irregular, bright red naked blotch at the sides of the head about each brown eye, running down almost to the heavy old ivory bill, as powerful as a hawk's, curved a bit at the end. Behind each small yellow ear was a tuft of ornamental feathers. The slim legs were dark, with the sheen of polished metal, and brownish black "pants" on the strong thighs above. Each leg was armed with a sharp black spur nearly an inch long.

The hen wore a more sober gown, although she was almost as large as the cocks, with the same pointed tail, somewhat shorter. At a distance this hen appeared a dull and softly blending gray, only slightly marked and barred. Nearer it was more brownish gray, mottled, and

almost impossible to see when motionless in dead grass or brownish weed stems.

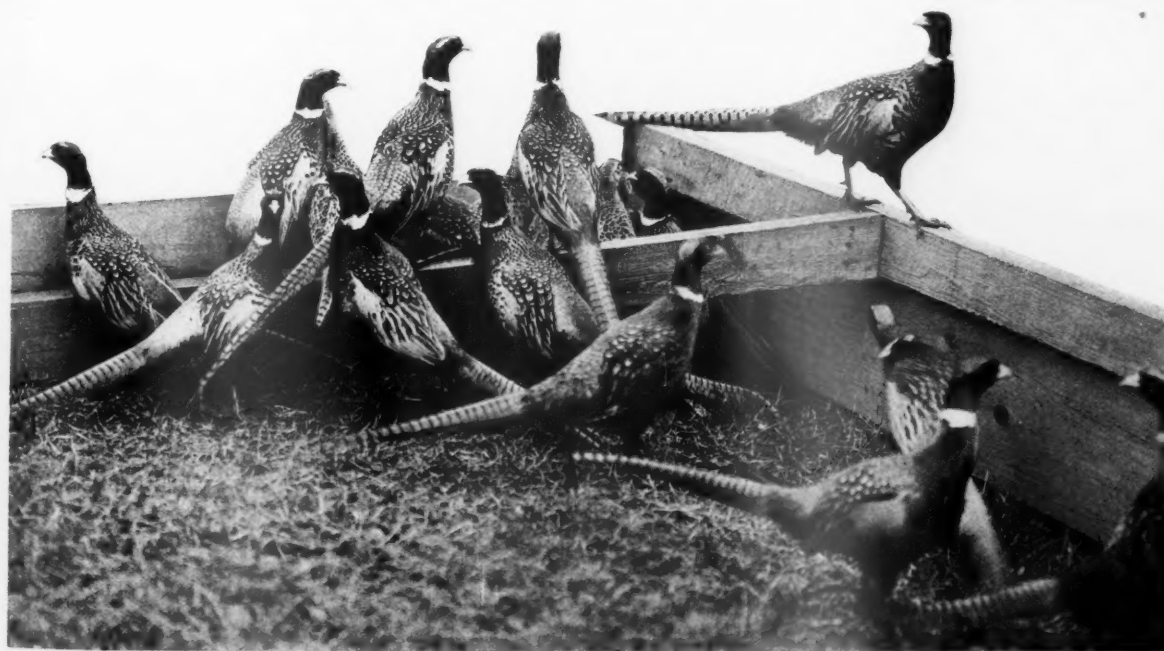
It is strange that this Asiatic game bird should be dressed as the lilies of the field, when all our native game birds have long since adopted the clothes best suited to make them inconspicuous in their natural cover. Witness

the mottled brown coat of the ruffed grouse, which all but makes the bird invisible on the ground, amid sticks and dead leaves. But, in exact contradiction to this safeguard, the members of the pheasant family seem to vie with each other to see which can develop the most beautiful plumage. All the novelty of feather development, all the bright colors of the rainbow, all the wondrous beauty of bird life, are to be found in the pheasant group. They seem to care not a single "Ca-ca" about protective

coloring and scorn any attempt to look like a bit of the landscape. They have gone to the other extreme and put on bright colors that would dazzle a gypsy bride.

And, stranger still, these brilliant colors, especially with our ring-neck pheasant, seem only to make the bird harder to see in our cover. This was partially explained in the late European disagreement, when the camouflage artists

**T**HE pheasant, as a comparatively new game bird in America, has a history no less interesting than the habits of the bird itself. Its origin seems to be lost in antiquity, although it is reported to have come originally from the vicinity of the River Phasis, on the Black Sea. The Greeks and Romans brought it to Europe for its beauty and delicate flesh. It was served on the tables of the Caesars. In the fourteenth century the kings and nobles of France naturalized the bird and it became royal game of the first class. Woe to the poor farmer caught killing a pheasant! He did not eat meat again for a long time. It is thought that the pheasant, like the fallow deer, was taken into England by the conquering Romans. In any event, it is an old resident there. It appeared on the bills of fare as far back as 1059 A. D. Attempts to transplant the ring-necked pheasant to America were not made until about 1880, and in delaying to get acquainted with this remarkable game bird some of our greatest wing shots—gentlemen all—missed a good bet.



CHINESE PHEASANTS WERE A DECIDED NOVELTY HERE WHEN THE FIRST PEN WAS BROUGHT IN BY A CHICKEN FANCIER, AND MANY CAME TO SEE THEM AND MARVEL AT THEIR BEAUTY OF FORM AND COLORATION. THE FIRST BIRDS WERE VERY TAME, AND IT IS ENTIRELY DUE TO AN ACCIDENT OF ESCAPE THAT WE OWE THIS DECIDED ACQUISITION TO OUR GAME BIRDS OF TODAY



finally convinced the fussy old war lords that certain blobs of bright colors are almost invisible in certain lights and against certain backgrounds. We know now that these artists were on the right track. Perhaps the pheasant family knew all this thousands of years ago!

Naturalists are still puzzling over the wonderful feather development of the pheasant group, especially the brilliant golden pheasant, the Lady Amherst pheasant, the Reeves pheasant, with a six-foot tail; the Impeyan pheasant, with the curious topknot; the Argus pheasant, with the beautiful wings, and others. They can't agree whether the males just dress up in this way to please the ladies and to satisfy their masculine conceit or whether it really is a protective device, or both. Certainly, all the pheasants take great pleasure in displaying their colors to their lady friends, and a six-foot tail cannot be of much assistance in avoiding natural enemies. This feather development took considerable time, probably thousands of years. We know that the Chinese pheasant was taken to the island of St. Helena three hundred years ago, and in all that time there has been only the slightest change of plumage.

There are no native pheasants in America, or in Europe either, for that matter. But now have come these Asiatic strangers to our all but empty covers, and every sportsman in the country greets them with a friendly howdy and bids them make themselves at home.

A man appeared in the distance (as they most always do when I am watching anything especially timid), cutting across lots to the village. The lighter-colored of the three cocks stretched to his full height and sounded a sharp warning: "*Ca-ca-ca-ca-ca!*"

It attested the keenness of his vision, the quickness of the bright brown eyes in catching any motion in the distance, and at the same time evidenced the way these old cocks warn every near-by pheasant of approaching or suspected danger. The cry was answered by a faint "*Ca-ca!*" farther down the river. The four birds ceased feeding instantly and walked slowly back to the weedy cover, reluctant, as always, to take wing, vanishing like magic within.

Whence came these Joseph-coated strangers? I will tell you first how they came to our valley, which was quite by accident, some years ago.

For a long time these birds were exhibited in this country by chicken fanciers, and they were raised only by certain men dealing in fancy birds, for parks and country estates. Although the pheasant has been naturalized in Europe for hundreds of years, it was not introduced into the United States as a game bird until very recent times. The Chinese pheasant, being extremely hardy, was more common at our chicken shows, but others of still brighter plumage were often exhibited. Even as late as last fall, there were pens of fancy pheasants at our county fair,

including the brilliant golden pheasant of the brightest red and orange; the silver pheasant, green and white; the Lady Amherst pheasant, which looks as though it might be a cross between the other two.

Of course, we sportsmen knew about pheasant-shooting in Europe, especially in England—Lord Nimrod in the Sunday papers, with his shooting guests beside him and the long rows of dead pheasants out in front—but this was not our idea of sport, so we "booed" the very thought of pheasant-shooting here. No he-man American, accustomed to hunting grouse in the beech wood and quail in the weedy bottoms, over good dogs, wanted to perch on a half-portion stool behind a stone wall, wearing a Fedora hat with a green feather in it and white kid gloves, and shoot badly frightened barnyard fowls as they were shoed out into the open by an army of beaters.

So, with many a loud pooh-pooh, we relegated pheasant-shooting to those who wore tall hats and one-piece spectacles. Right here we missed a good bet for years and years. Not until there wasn't much of anything else left in our covers to shoot did we take an active interest in this new game bird.

Pheasants were a decided novelty here when the first pen was brought in by a local chicken fancier, and the curious among us used to go often and look through the chicken wire screen at these beautiful birds. Even then we thought them more like fancy chickens than game birds. We understood, in a vague way, that these birds came from China, along with firecrackers and silkworms, on which they probably fed, and that they were said to be good to eat, if anyone had the heart to kill such a beautiful thing. But that they could live here in our climate no one ever dreamed.

This first pen of birds here were very tame, certainly no wilder than Leghorn chickens. They had never known what it was to be free for one minute. They knew nothing about cover, about hustling for grub in January. Not for generations had they been compelled to protect themselves from natural enemies. Their worst enemy was a dark-complected man with a burlap bag on a dark night! You would have thought the old instincts as dead as the great auk. But instincts do not perish so easily!

One morning the owner of this particular pen forgot to latch the yard gate. He neglected this because when he stooped over to fill one of the drinking fountains a pair of long spurs were suddenly driven into his anatomy at the point of highest elevation. He fought off the old cock and a deep desire to dine on pheasant that very night and backed hurriedly out of the pen. When he returned to feed his pets that night, wearing a thicker pair of pants, they had vanished into the great unknown. The door, swinging idly in the wind, gave no hint as to where they had gone. And no hint did he get of their whereabouts all that summer. Wild instincts had been only sleeping, patiently waiting for opportunity. The minute that door opened these "tame" pheasants made a bee-line for the thickest cover along the Littlest River. Every one of us agreed they would soon be picked up by foxes,

[Continued on page 620]



# Why the Town of McNary Moved

## A Tragedy of the Southern Pines and a Parallel Which Carries its Own Lesson

By H. H. CHAPMAN

THE following item appeared in the Conservation News of the Louisiana Department of Conservation a short time ago:

### McNARY, LOUISIANA, PICKED UP AND TAKEN TO McNARY, ARIZONA

The tragedy of the timberland was symbolized Monday, when the last of the population of McNary, Louisiana, moved away in a 21-coach train bound for the new village of McNary, Arizona.

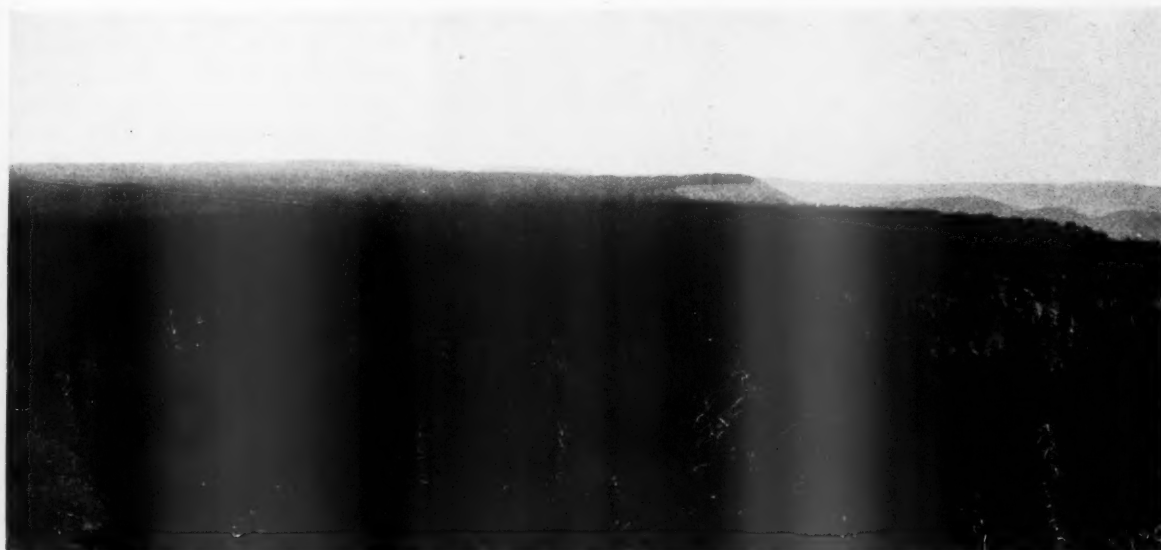
Two months ago, Louisiana had this thriving town of 3,000 persons. As the forests became denuded of pines, the employers of the villagers began looking about for a new site. They found it in Arizona.

In two long special trains half of the town was started westward to build a new village. Today the last of the inhabitants left. In 52 hours they will be at a point 80 miles from the new activity. Thence they will travel over a railroad just built into the heart of the timber country, and they will be back home in McNary.

McNary, Louisiana, was situated in the heart of the Longleaf pine belt of western Louisiana. McNary, Arizona, is surrounded by millions of acres of virgin stands of western yellow pine. The abandonment of the former site and the bodily transfer of the town's population to a National Forest and Indian reservation in this western State carries a lesson of great significance for all who are

interested in the practical working out of two opposing theories affecting the management of one of our great national resources, the forests, namely, *public versus private ownership and management*. These two types of forest are strikingly similar in appearance and behavior and the methods by which they may be managed so as to secure the perpetuation of the forest by natural reproduction are almost identical and consist in leaving a sufficient quantity of seed trees and protecting the resultant reproduction from fire and from injurious grazing. Hogs do the most damage to Longleaf pine while sheep are almost equally injurious to its western relative.

Of the two, the Longleaf pine is most easily reproduced, when the requisite protection is forthcoming. In spite of this fact, practically 95 per cent of Longleaf areas, after cutting the virgin timber, fail to reproduce to the species and come up to a thicket of worthless Blackjack oak which in turn renders future reproduction of Longleaf almost impossible. This condition is the direct result of the theory of economics which entrusted the ownership of these vast areas of forest wealth to private parties instead of retaining them in government ownership. Private operators saw only the mature timber which was the finest in the South, if not in the entire East. They purchased this land from a complacent government for \$1.25 per acre in unlimited quantities back in 1870-80 under the old Cash



#### SITE OF THE NEW MILL TOWN OF COOLEY, RECENTLY RECHRISTENED McNARY, ARIZONA

The great stretch of virgin forest on the Mogollon Plateau in the Sitgreaves National Forest. This spot now hums with industry and the saws are working day and night. The abrupt cliff on the right, facing south, known as the Mogollon Rim, runs for hundreds of miles across the state. The timber is logged down the gradual incline to the left, northward.



#### IN THE SOUTH

Top.—A Longleaf pine forest in La Salle Parish, Louisiana, before cutting.

Middle.—The same area after cutting by private owners. No seed trees were left to start a new forest and the land was abandoned to fire and grazing. A graphic answer to "Why McNary moved."

Bottom.—How cut-over lands look on the holdings of Henry Hardtner, a private owner in Louisiana who has applied the principles of forestry to his timber lands.

Entry law and what they did not secure in this way they acquired later from homesteaders and settlers at prices as low as \$0.25 per thousand board feet or under \$5.00 per acre. Large mills were installed and a huge overhead in-

curred, requiring a rapid cut to pay interest; taxes (fortunately low) and dividends and to depreciate the plant on the theory that the entire investment, plant, railroad, rolling stock, equipment, town and good-will would be liquidated with the cutting of the last log. In this they were merely following the precedent established largely by these identical firms in the pineries of Michigan and Wisconsin, from which many of them had emigrated after completing the cut.

With a few belated exceptions, the operators throughout the length and breadth of this vast domain failed to so modify their methods as to secure the renewal of the forest. One and all assumed or even declared that it was out of the question. No steps whatever were taken to leave seed trees. Even the chance saplings or cull trees left in early operations were later logged off, and the land was thoroughly denuded. Thus the possibility of ever securing natural reproduction of Longleaf pine on by far the larger portion of the entire type has been lost completely and for all time, which is a far more serious thing than the mere cutting of the mature timber. This result could have been avoided and reproduction could have been secured over practically every acre of this domain, provided the owners of the land had been interested enough in such a project to take the necessary steps to obtain it.

But this meant the exclusion of the hog and the leaving of an investment in land for a long future period. In such a project the owners were *not* interested. They had planned their entire economic structure on the basis of forest destruction, not forestry, and intended to go through with it and quit. The time required to wind up the whole operation was reasonably short. An increasingly large per cent of these owners have already completed their cut. What remains on this land? Nothing! In most cases the land is not capable of agricultural development and the sale of such lands for this purpose constitutes an economic crime. Its purchase by the public for forestry is the only promising outlook, and on such areas the worst

possible conditions have been created, so that they will either remain absolutely or comparatively unproductive for decades or else will require intensive investments to restore the disturbed balance of natural forces and bring

back the pine by artificial measures of reforestation. The fire risk on these exposed wastes is excessive, for sedges and briars compete with scrub oak for occupation of the soil. Second growth on these Longleaf areas is so scarce that an entire State had to be combed to get a few acre plots to construct a yield table for younger age classes.

This is not an argument for enforced regulation of cutting on such areas, desirable as such a policy may be from a public standpoint. What it does emphasize is the economic results which have been directly brought about by the system of private ownership and private operation of Longleaf pine lands throughout the South. These processes are still in active operation and will continue in all probability with rare exceptions until the residue of this forest type is in turn denuded and abandoned to waste. This condition could have been controlled effectively by public ownership and management, but these truths were not self-evident during the era which fixed the economic policy for southern pines, and the nation is now paying the penalty and will continue to pay it in the form of high prices and increasing scarcity of pine lumber for an untold period into the future.

Turning now to the counterpart of this type, the western yellow pine in Arizona and New Mexico, we find that where this timber was acquired by private owners and logged, an exactly similar condition prevails. No seed trees are left, the land has been burned over, the advance reproduction destroyed by fire and the type reduced to a desert as far as any future production of pine is concerned. There is even less chance here than in Longleaf pine, of private owners solving the problem, because of slower growth and greater difficulty of securing reproduction and the larger number of seed trees required to secure a satisfactory stand after cutting. Confronted by these difficulties and faced with taxes on cut-over lands these operators pursue the policy sanctioned by generations of shrewd business men and refuse to embark on a doubtful investment in "forestry."

But by the time logging operations and private land acquisition had gotten well under way in these western regions, the public had awakened to their interests and

had adopted the policy, almost too late, of retaining such timbered lands in public ownership. By far the larger portion of the western yellow pine in these two States was



#### AND IN THE WEST

Top.—Note how like a southern pine forest is the virgin forest of western yellow pine. The picture was taken on the Mogollon Plateau, Arizona. Lack of young trees is due to fires and excessive grazing.

Middle.—In Arizona, too, private methods of lumbering have denuded great areas of land suitable only for growing forests.

Bottom.—How the western yellow pine perpetuates itself when seed trees are left in cutting and the area protected from grazing and fire.



so reserved. The establishment of National forests did not mean the locking up of the timber resources as in parks, but signified, instead, that the lumbermen would be permitted to cut and manufacture the ripe and decadent trees, and supply the public with the forest products which will go far towards reducing the cost and increasing the standard of living in America. But before embarking on a wholesale policy of timber sales the United States Forest Service proceeded to find out what was necessary to secure a complete stocking of the area to a new crop of pine reproduction, and have been steadily pursuing this investigation for twenty years.

The facts thus determined are incorporated into the contracts for the sale of these stands of timber. The operator is obliged to leave all trees that are not marked for cutting, and this amounts to as much as 30 per cent of the merchantable stand. Then he must dispose of the slash left in logging in a manner which has been found to be best adapted to securing fire protection and reproduction. The purchaser does not stand the cost of such reservations, but this is deducted from the price he would otherwise pay for the stumpage, as it is a legitimate public expense or investment in the future forest. The pine timber, which has now been purchased by this Louisiana firm, is located on the Sitgreaves National Forest in eastern Arizona on the Mogollon plateau and the government specifications, under which the timber will be cut, will protect the forest from denudation and insure reproduction and a second crop at some future date.

This year, the large lumber company situated at McNary, Louisiana, "completed their cut." Nothing was left in the State which they could acquire with which to continue operations. So they purchased the plant and investment of the original purchaser of this huge tract on the Mogollon Rim, and the town of McNary, Louisiana, with

its 3,000 inhabitants is no more. With timber gone, buildings abandoned, plant and investment liquidated, the parish in which this denudation occurred will endeavor with increasing difficulty to raise sufficient taxes on the imperishable but nonproductive land, which is all that is left to it of the area covered by these timber holdings, to main-

tain its public functions, support its schools and keep its roads in repair. McNary, Arizona, may in turn, at the end of 25 to 30 years, suffer a similar dismantling. But instead of a desert, there will be left a thrifty stand of pine which at the end of another two or three decades may justify a second sale almost as large as the first. Or if, by that time, the large mill with its voracious appetite for saw logs has been classed with the dinosaur and other extinct monsters, this tract will be the scene of many smaller operations whose total output will equal that of the bigger plant. Under circumstances less exacting as to transportation costs, smaller mills are already favored in preference to large plants on public forests. Such mills, under present plans of management, once established may have a perpetual cut. Plans are rapidly being made based on the rate of growth per acre which these forests produce under existing cutting regulations, by which the total possible sustained cut of the forest is determined, and the actual output then regulated to conform to this limitation.

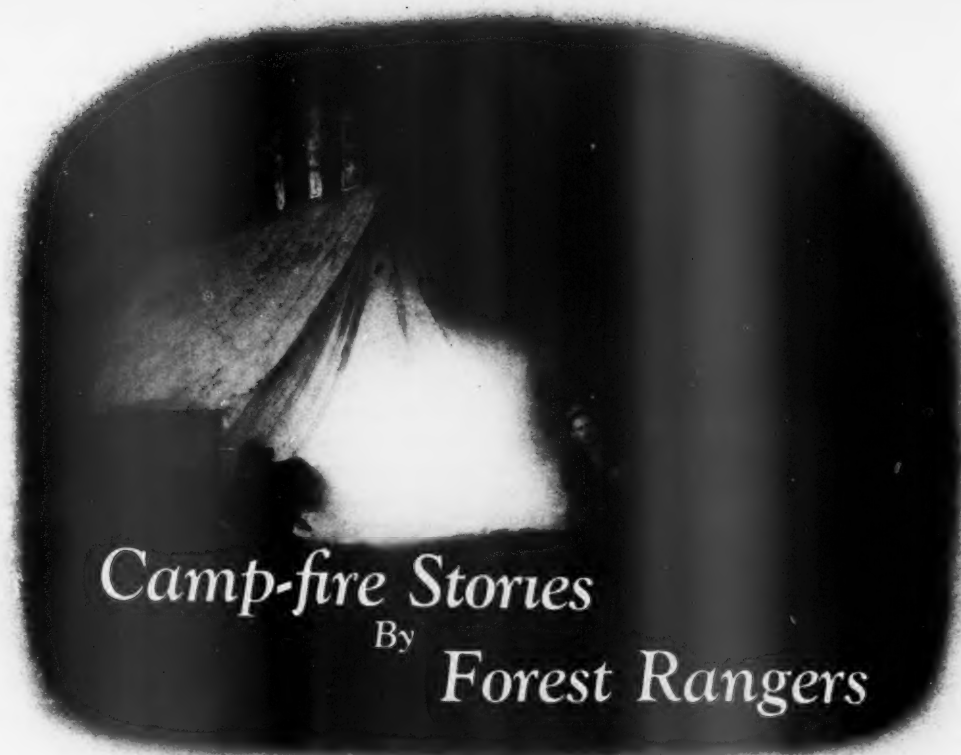
Under private ownership, a temporary and intensely destructive operation is almost inevitably carried on in these specific types of timber, for which course so many weighty private reasons exist, that probably on less than 5 per cent of the Longleaf area will any effectual measures of forest protection and preservation ever be instituted by these owners in time to prevent complete denudation. Under public ownership and an intelligent public policy based on the cumulative weight of experience and research with a personnel protected from political ineffi-



**A TIMBER CROP AREA**

In marked contrast is this area of western yellow pine after the mature timber has been cut under Forest Service methods. Santa Fe National Forest, New Mexico. The land is kept in a continuous state of forest growth.





## Camp-fire Stories

By

Forest Rangers

# LIARS' NIGHT

## *The Lady and the Snake*

"JIM, when you say a mountain lion jumped on your horse's back and you in the saddle, you're departin' from the truth and you can't get away with it—not with this bunch of trail-broke rangers. In the first place, mountain lions are mighty particular not to jump on horses' backs when there's a forest ranger in the saddle, and in the second place, if a loba ever followed you I'm here to state you'd be high-tailin' it up a tree 'fore the old cat could blink an eye.

"Now you just throw a chunk on the fire so I can see to build me a smoke and I'll tell you a real unusual happenin'. We rangers meet some mighty queer people, you're all bound to admit. Well, it ain't so long ago that a little Eastern woman looks me up at Espanola and says I'm elected to guide her up to those Puya Ruins. There ain't nothin' there but some old cliff-dwellin's that no one's lived in for goin' on a thousand years, and so I told her, 'Ain't that wonderful!' she says, and seein' I couldn't head her off the trail, I said I'd take her up. Seems she'd come all the way from New York State just to see those old ruins.

"On the way up I sure thought that woman would talk me cold. She was a regular machine-gun with questions: Where did the cliff-dwellers come from? Where were they now? Why had they gone? Did they eat their friends? Did they ever get drunk? About then somethin' would start me coughin', and when I'd quiet down a bit—

bang, bang, bang, would come those little hard-nosed questions.

"Well, we finally got as far as you can drive a buckboard, unloaded, and had some lunch; then we started to climb up to the cliff. The woman was carrying 'an umbrella to keep the sun off her complexion. I was walking a little ways ahead of her and suddenly heard a rattler sound off. Not wanting to scare her too much, I did not say anything about seeing the snake, but just remarked that there might be some rattlesnakes among the rocks and she better watch where she was stepping. Say, she closed that old umbrella right quick, and as she walked she waved it in the grass and rocks ahead of her. Well, we were almost to the first cave house when, sure enough, a big old rattler let go with his rattles, not six feet from her. She let out a yell and started to poke at him with that umbrella, backing up toward the cliff. The snake finally jumped, and she just poked that umbrella down his throat, and he started to swallow it. By the time he got about half of it swallowed the woman had backed into the wall, and as she poked, the snake swallowed. Say, she sure was one scared woman. Me? All I could do was to stand there with my mouth open. Finally she gave another poke and yelled, 'Oh, Mister, what shall I do?' By that time I got my wits back and I just yelled, 'Open the umbrella.'

L. D. LEMLEY.

## Old Silvertip

"SLIM, will bears fight?"

Slim, squatting by the fire, shifted his weight to his other leg, took a drag on his cigarette, and replied: "I'll tell the world they will. I had a run-in with one that was sure rarin' to go. It was two years ago this coming fall, while I was counting cattle over in the Dry Creek district.

"One afternoon as I was riding through those willow flats in the Canada Blanca—you know the place, don't you, Bill? Well, as I was riding through the willows, not thinking of much of anything, out pops an old silvertip from behind a clump of brush. There I was, with neither a gat nor a Long Tom with me. The boss wanted us to always carry some sort of a shooting-iron for just such times, but I never did like the feel of a saddle gun under my leg, and I had loaned my six-shooter to "Shorty" Belnap, who was going to a *baile* in the *plaza* and wanted to be ironed in case something should happen. Well, as I was saying, I didn't have a gun, so I sort of rides a circle around the bear, with him turning and growling. I saw then where he had been eating on a yearling. That got my Irish up and I says, 'Old boy, if I can't shoot you I can sure drag you to death.' I was riding a good-sized blazed face sorrel and I knew he could handle the bear. All this time the bear was just standing his ground, growling fiercer and fiercer and grinding his teeth like.

"So I takes down my rope—it was a new forty-foot one—and spurs up my horse. I makes a pass, but wastes that loop for *Blaze Face* shies just as I throws. I coils another, and this time hangs it fair and square around the bear's neck. I takes my dalties and heads old *Blaze Face* down the draw, spurring him at every jump, and we quit that place right sudden. I sort of thought it was funny that I didn't feel the bear go "bumpity bump" as I dragged him over the rocks, but I was so busy dodging dog-holes and spurring old *Blaze Face* along that I didn't have much time to think. Pretty soon I heard a sort of growl, and, giving a quick look over my shoulder, I nearly fell out of

the saddle. I sure did unwind that lariat and throw it in the clear in a hurry." Slim paused and picked up a glowing twig to relight his cigarette.

"Why did you do that?" breathlessly asked the young ranger. "Why," continued Slim, "there was Mr. Bear, not more than ten feet behind me, growling and foaming at the mouth and coming up on the rope, hand over hand."

A. D. READ.

## Tame Lightning

"SPEAKING of unnatural happenings" said the Colorado ranger, "of course you are all familiar with lightning playing among the long horns when in times gone by you were on night-herd.

"Well, I was trailing in last night from Medicine Bow. The sky was all overcast and the air heavy, but no rain. About 9 o'clock I was riding along the road opposite Aunt Mary's ranch. Dark! Say it was the pitchiest dark I ever was in. Couldn't see my hand when I held it out and couldn't see my horse's head. Had the little black. Well, first I noticed two little lights about where his ears ought to be. Fascinated me. Got a creepy feeling trying to think up that will-o-whisper stuff. Before I had a chance to get feeling spooky I see the outlines of my horse's ears rimmed in little lights. I took a chew to help me study it out. First spit and I spat a spark. Then the horse sneezed, and it was like shooting a double-barrel gun in the dark. Then I sneezed and emitted a shower of sparks. Come on to a bunch of horses. All their ears limned out in electric lights. Whenever one switched his tail he switched a shower of sparks. Looked at my spur rowels and each prong supported a little light. And when I got into town I couldn't see the town lights for the illumination I carried with me. Then——"

"That's enough. No need to adjourn. I pronounce this evening broke up and good night to all," shouted the old ranger, making for his bed under the leaning pine tree.

L. F. COUGHLIN.

## Leaves

Hear the rustle of the leaves,  
Autumn leaves;  
How they hang from boughs and trees,  
Dying leaves.  
Dipped in blue of emerald tint,  
Autumn chill with wintry hint,  
Red and gold through woodlands glist,  
Vibrant leaves.  
Burned and blown through city street,  
Crushed by cars and hurrying feet,  
Ruined leaves.  
Orange, crimson, every hue,  
Splashed with radiant color through,  
Ageless fabric, ever new,  
Fallen leaves.

Ricochetting here and there,  
Driven leaves;  
Sunshine feeders, brown and bare,  
Useful leaves.  
Work fulfilled at summer's close,  
Sunbeams stored in cellulose,  
Sweetened labors done for those,  
Unborn leaves.  
Round unceasing, life and death,  
Birth immersed in springtime breath,  
Budding leaves.  
Pressed to stem, they wait anew,  
Sunshine signals steeped in dew,  
Springtime leaves the summer through,  
Wondrous leaves.

—W. Goodrich Jones.

# "HICKORY AS A MEANS TO AN END"

By J. A. COPP

Photographs by courtesy of Hartwell Brothers

THE handle of an edged or blunt striking tool, symbolizing the means to an end, has from time immemorial received due recognition by artists, philosophers, and poets. Thor is chiseled grasping the handle of the thunder hammer; Æsop begs a handle from a gullible forest and his now mighty ax annihilates the foolish donor. Homer

takes Odysseus from the delices of Calypso's Isle to fashion an olive-wood adze handle and hew out his raft of emancipation.

Much art on modern industrialism, from the façades of civic buildings to the illustrated advertisement of the bond-house mortgaging our future, swings the handle in the grip of their mighty heroes of structural progress.

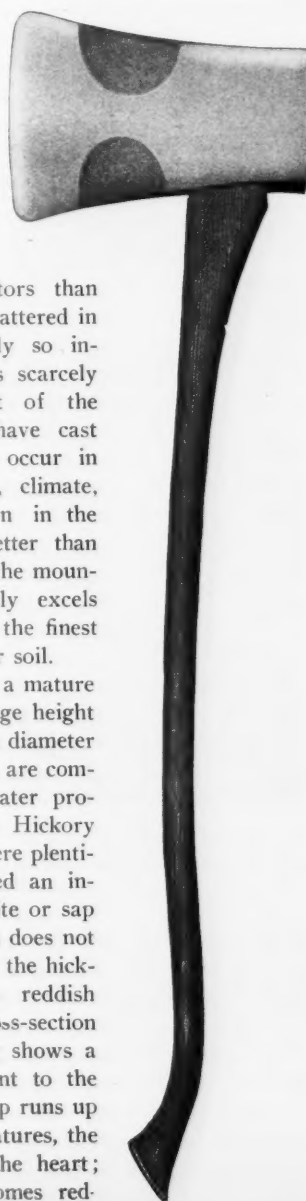
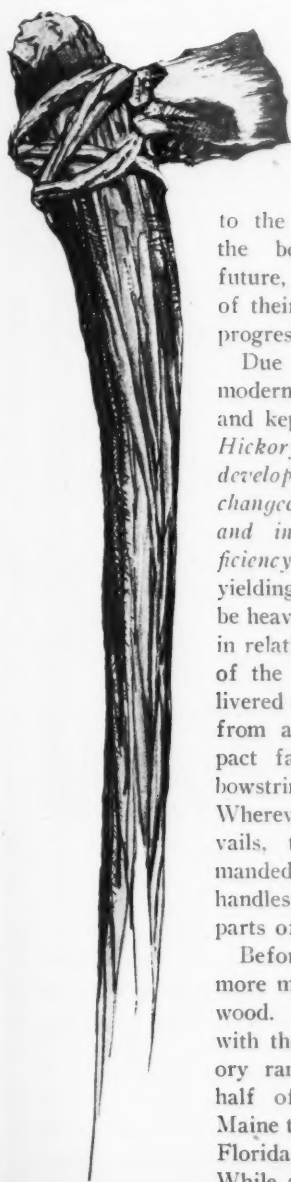
Due to American Hickory, the modern handle has grown efficient and kept pace with the times. *The Hickory handle, as produced and developed in America, has radically changed the shapes of striking tools and infinitely increased their efficiency and speed.* The slender, yielding hickory permits the tool to be heavier in proportion to and freer in relation to the handle. The force of the blow can be multiplied, delivered quicker, more accurately, and from a greater distance. The impact falls unimpeded by the slim bowstring-like Hickory handle. Wherever modern industrialism prevails, the hickory handle is demanded. Over 20 per cent of the handles made are exported to all parts of the world.

Before carrying the word further, more must be said of such a useful wood. Named by and indigenous with the Red Man, the genus Hickory ranges throughout the eastern half of the United States, from Maine to Iowa in the north and from Florida to Texas in the south. While scattered sparsely east of the Appalachian Mountains, through the

Middle West, south of the Great Lakes, it arrives at workable density only in the central Mississippi basin. There are twelve more or less defined species, distinguished by the characteristics of the bark, nut, growth, or leaf. No two families, or individuals comprising them, of the human species are identical; so it is with Hickory. The species overlap. The better varieties of the less

desirable excel in utility the poorer varieties of the supposedly better species, according to the conditions under which they are grown. Training, obstacles to be overcome in the struggle for existence, and environment are, as with people, often stronger determining factors than heredity. Hickory trees scattered in pine woods are frequently so influenced that their bark is scarcely distinguishable from that of the pines with whom they have cast their lot. Inconsistencies occur in reference to environment, climate, and soil. Hickory grown in the river bottoms is often better than that from the benches of the mountains. Southern frequently excels northern-grown stock and the finest quality often grows in poor soil.

The average diameter of a mature tree is 18 inches, the average height 75 feet. Trees 30 inches in diameter and well over 100 feet high are common and many attain greater proportions. The fact that Hickory trees, white to the heart, were plentiful in the past has created an insistent demand for the white or sap wood handle. The layman does not realize that the majority of the hickory procurable today is reddish brown in color. The cross-section of an average hickory log shows a rim of white only adjacent to the bark, through which the sap runs up and down. As the tree matures, the sap ceases to flow near the heart; this part of the tree becomes red-



brown in color, and is older, stiffer, and nature-seasoned when manufactured. It is often equal to the white or sapwood, according to the quality of the tree from which it was cut. The red heartwood of some trees is actually superior to the white sapwood of others and is less sensitive to attack by insects and atmosphere. In Europe the utility of red wood is better understood than at home. As a wood, Hickory combines toughness, strength, and resiliency as none other in the world. In tests by the United States Government, practically twice the blow was required to completely fracture average Hickory pieces compared to the combined average of oak and ash, its nearest competitors in American woods.

On the other hand, there are several distinct disadvantages, such as severe shrinking and warping when stored too long a period or when placed in too warm or dry surroundings. Hickory rots quickly by contact with the ground and is very liable to attack by insects. Not striking in appearance, as is walnut, quartered oak, bird's-

The logging phase of the industry is rapidly becoming a problem with the growing demand for Hickory and the rapidly diminishing supply. Fifty years ago a tree was not considered worth cutting which, after being bored with brace and bit, did not test solid white, clear and heavy, right to the heart. Even ten years ago the inspection was strict. Today any log, though of the red heartwood and half-way free from knots and defects, is acceptable.

In the cutting up of such timber, over 90 per cent is either culled or sacrificed as wastage. From 6,000 pounds of logs less than 500 pounds of handles are obtained, and such logs comprise only the choicest part of the tree, from butt to the first limb. In the past, 300 handles to the cord was expected. Today the amount is nearer 200.

To make the twenty million handles required, sixty thousand cords are annually cut, sacrificing at least seven hundred and fifty thousand trees, and probably one million is nearer the figure. The *bête-noire* of the handle industry, the Moloch to whom the splendid and fast-disap-



ONLY BOLTS OF SELECTED HICKORY ARE USED IN THE MANUFACTURE OF HANDLE STOCK. NOT SO DESIRABLE FOR INTERIOR FINISH AS SOME OF THE MORE ATTRACTIVELY GRAINED WOODS, HICKORY, BECAUSE OF ITS REMARKABLE WHITENESS AND STRENGTH, AND THE LONG, CLEAN, STRAIGHT GRAIN OF ITS SAPWOOD, IS THE ONLY WOOD ADAPTED TO CERTAIN SPECIAL PURPOSES

eye maple, or gum, yet the remarkable whiteness, the clean, long, straight grain of sapwood hickory, fashioned into a slender well-shaped handle, properly finished and waxed, possesses an incomparable beauty.

The making of Hickory handles is typically an American industry. First, because logging and sawmilling are an important phase (which forms of endeavor have played a prominent part in forming American characteristics). Second, because the method centers on a Blanchard lathe, a Connecticut Yankee invention.

pearing hickory forests are further sacrificed, is the automobile, demanding at present around two hundred million spokes annually, or nearly three million additional trees. The automobile makes the great devastation of the pioneer land-clearer, who rung and deadened so much hickory in the past, look small in comparison. Next come the myriads of golfers of both sexes and of all ages, from the eight-year-old caddy prodigy to the octogenarian multi-millionaire. The wagon and agricultural implement manufacturers make further, though smaller, demands. All



must be appeased, despite the premier claim of the handle. Such competition forces the industries dependent upon Hickory into the more inaccessible timber sections.

Twenty-five years ago a handle-turning mill away from the railroad was not considered; today it is imperative. The situation is occasionally relieved by the opening up of pike roads, though hickory tracts on such highways are soon exploited. In direct ratio with the growing inaccessibility and sparsity of hickory timber, the handle-manufacturing industry withdraws from mass-production methods.

Formerly, Hickory was carried from railroad centers and worked on a larger scale, with improved machinery and methods. Today it is often worked away from the highways with the primitive lathes of seventy-five years ago. In instances even these are put aside for the Froh hand broadax and draw-knife, deliberately slight-

ing James Watt, who invented the steam-engine, and all his lesser satellites. The successful handle-maker of today must take to the more primitive ways of our pioneer grandfathers and adopt as a slogan "Back to the woods."

Reference has been made to the Blanchard lathe. This ingenious method, by which an irregular shape with dissimilar ellipses at different cross-sections can be copied

(by means of a pattern advancing and revolving over a gauge, and thus regulating the handle blank as it advances over the cutter-head), has stood the test of nearly a century. Other lathes have been invented for the less difficult shapes, which will turn 2,500 pieces daily against 450 for the Blanchard; but they will not produce as good a shape and pattern and are far more extravagant with material. The Blanchard lathe requires almost a minute to produce a 36-inch handle. One workman will operate

from two to four lathes, according to the length of the pieces, turning out an average of 1,350 36-inch handles daily. The rough turned handle is then sanded on belts of different finenesses of sand and polished by the same method.

The striking-handle industry owes its inception to the Blanchard lathe, and started at Norwich, Connecticut, a few miles south of the inventor's native town, Stafford.

With the growing demand, developed on a larger scale on the Middle Atlantic coast at Baltimore and on the Great Lakes at Sandusky, the Hickory obtainable in these sections soon proved too scattering and insufficient. The industry moved to its proper location, the central Mississippi country, and now centers at Memphis, the hardwood metropolis of the nation, to make its last stand.



STEPS IN THE EVOLUTION OF A HICKORY AX HANDLE: FROM THE 40-INCH CUT OUT OF A HICKORY LOG TO THE HANDLE BILLET, WEIGHING ABOUT EIGHT POUNDS; NEXT, TO THE BLOCKED BLANK, WEIGHING FIVE POUNDS; THEN TO THE ROUGH HANDLE, PARTIALLY TURNED, AND FINALLY THE FINISHED 36-INCH AX HANDLE, WEIGHING ONE AND A HALF POUNDS

## The Committee on Elections

THE following comprise the 1925 Committee on Elections, named at a recent meeting of the Board of Directors of the American Forestry Association: Howard F. Weiss, of the Research Department of the Burgess Laboratories, at Madison, Wisconsin; John B. Burnham, president of the American Game Protective Association, and Col. Henry S. Graves, provost of Yale University and dean of the Yale Forest School. The By-Laws provide that the President, twenty-one vice-presidents, the treasurer, and a number of directors for stated terms shall be elected annually, election being held by letter ballot from the members of the Association.

The duty of the Committee on Elections is the nomination of officers of the Association to be voted on at the

annual meeting. Other nominations are acceptable, however, if made by a group of not less than twenty-five members of the Association.

The committee will be glad to receive suggestions for nominations, and these, together with any direct nominations made by groups of members, must be in the hands of the committee on or before November 1 of this year. They should be addressed to "Committee on Elections, The American Forestry Association, Lenox Building, Washington, D. C."

Nominations will be published in the December number of the magazine and letter ballots later furnished all members.



## Pine White

The Story of a Pine-loving Butterfly  
Whose Nearest and Only Relative  
Dwells in the Malayan Islands

By REGINALD C. BARKER

(Photographs from specimens in the National Museum, through the courtesy of the Office of Forest Insects)

IN 1868 Dr. William H. Edwards, who at that time knew more about the butterflies of the United States than any other living person, announced that he had discovered a new kind—the only species of its genus. This butterfly he classified and named *Neophasia menapia* (the Pine White). In the course of his investigations into its life history Dr. Edwards found that the caterpillar of this butterfly fed exclusively upon the needles of the yellow pines of Idaho, Washington, Oregon, and British Columbia; but, timber being plentiful at that time, nobody paid any particular attention to the “theory of a bugologist.”

The years passed and, except by a few “bugologists,” the Pine White butterfly became forgotten—until 1882, when it suddenly made its appearance in vast numbers in the woods near Spokane, Washington, and completely denuded of their foliage several hundred acres of yellow pines. Since then there have been periodic outbreaks in Idaho, Washington, and several other western regions. In 1890 the Pine White butterflies appeared in the Olympic Mountains, and again in 1895, when their bodies were so numerous that they covered the ground. In 1893 the butterflies appeared in the Payette and Boise River (Idaho) watersheds and, in the words of the oldest settler, “stripped the pines from Squaw Creek Hill to Payette Lakes.”

Again, in 1896, the insect appeared in Idaho and during a period of three years defoliated several large areas of pines in widely separated districts. During these three years, however, an army of wasplike parasite (*Theromia fulvescens*), which made a sound like a swarm of bees, attacked the caterpillars, and there was a sudden end to the outbreak of the Pine White butterfly. For five years afterward I never saw a single one in Idaho.

One of the worst infestations of this butterfly occurred in 1922 upon the holdings of the Boise-Payette Lumber

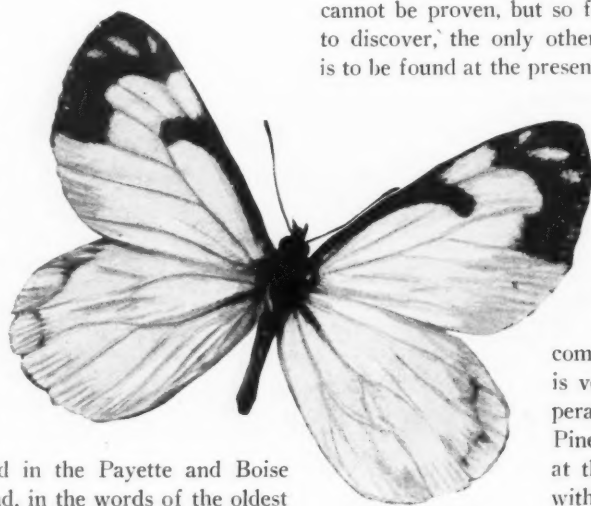
Company in Valley County, Idaho. Here the author found ten sections of matured yellow pine that had been almost completely defoliated by the caterpillars of the Pine White butterfly. Upon all of the second-growth pines examined the eggs of the butterfly were found in great numbers. This was during the month of September. It was found, upon examining some of the pupæ cases of the previous brood, that only about 35 per cent of them were unparasitized. From that 35 per cent came the eggs found upon the needles of the trees. It was found by counting the dead butterflies upon some very small trees that the males exceeded the females by as many as nineteen to one. This is presumably one of Nature's provisions that all the females be assured of fertilization.

Whether the Pine White butterfly is an imported pest cannot be proven, but so far as the author has been able to discover, the only other known variety of its family is to be found at the present time among the islands of the

Malay Archipelago. So it is possible, even probable, that the first eggs, or possibly the larvæ or pupæ, were brought to one of our Pacific seaports upon vessels arriving from those islands.

The Pine White butterfly resembles very much the common cabbage butterfly, which is very common all over the temperate zone. The wings of the Pine White butterfly are marked at the tips and on the under side with black, the females being the most heavily marked, and with

small orange spots on the under side. The eggs are very pale green in color, flask-shaped, and fluted on the sides. The eggs are deposited in rows, with from three to fifteen eggs in each row. They are found adhering to the under side of the needles. The larvæ, or caterpillars, are dark green in color and are about an inch in length when full grown. The pupæ are cylindrical in shape, dark green in color, with a narrow white band down each side. In the great infestation of the Idaho yellow pine during 1922 the transformation from the pupa to the imago took place in June and July.

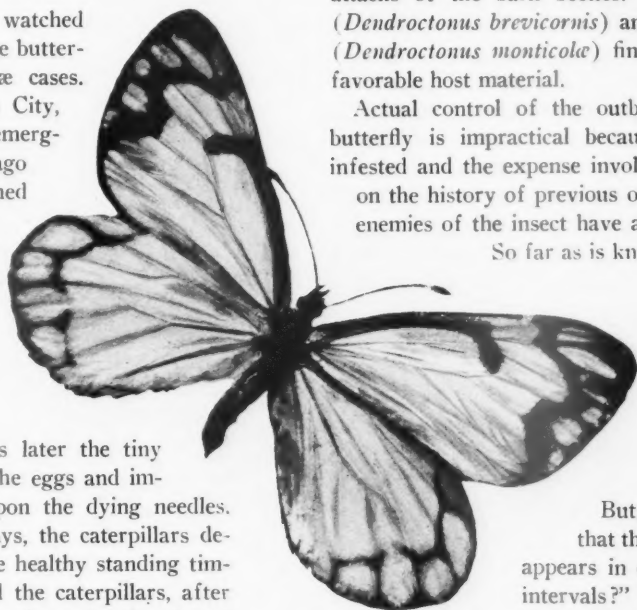


There has been considerable controversy regarding the time of year that the Pine White butterfly first makes its appearance. Some eminent authorities maintain that the eggs are laid by the butterfly upon the foliage of the pines in the fall of the year. Other authorities, equally eminent, contend that the eggs are deposited during July and August.

In June, 1917, the author watched specimens of the Pine White butterfly emerge from the pupæ cases. This happened near Idaho City, Idaho. A short time after emergence the wings of the imago (adult butterfly) had attained their full growth, and the insects soared upward, presumably to find their mates. A few days later the author found the tiny, pale-green eggs upon the needles of a pine he had felled. Seven days later the tiny caterpillars emerged from the eggs and immediately began to feed upon the dying needles.

However, after a few days, the caterpillars deserted the fallen tree for the healthy standing timber. In the case mentioned the caterpillars, after going through a succession of moults that lasted seventy-one days, went into the chrysalid (pupa) state. Two weeks after that the adult butterfly appeared. According to the author's observations, in this case the butterfly was double-brooded; for the first butterflies must have emerged from pupæ that had lain dormant during the whole of the preceding winter. The second brood would not reach the chrysalid stage until the year had advanced so far that there was not sufficient warmth to the sun's rays to hatch out the adult insect from the chrysalis; so again it is a reasonable hypothesis that the last brood winters over in the chrysalid stage; for, although at the time mentioned above the author was felling pines every day in the infested area, in no case did he find eggs after the second brood of chrysalids had made its appearance.

Nature has provided that the adult caterpillar, when undisturbed, lets itself down from the branches of the pines by a silken thread and pupates not in the tops of the trees, but upon underbrush, fences, or among the dry needles beneath the trees. If the needles of the pines are, as some claim, infested by the dormant eggs all winter, why would it be necessary for the insect to prepare for its own propagation by descending to the ground? The answer seems to be, because it cannot survive the winter in the tops of the snow-covered pines. Yet the author himself saw needles covered with the eggs of the Pine White butterfly during September, 1922. So there can be little question that the Pine White butterfly spends the winter in both the egg and the chrysalid stage and must, therefore, be double-brooded.



Though large areas of pine timber are defoliated by the larvæ of the Pine White butterfly, its natural enemies prevent the continuance of the epidemic in any one locality long enough to be *independently* destructive to the timber. The chief danger from this insect is its weakening of the resistance of the trees to the subsequent attacks of the bark beetles. The western pine beetle (*Dendroctonus brevicornis*) and the mountain pine beetle (*Dendroctonus monticolæ*) find the weakened trees very favorable host material.

Actual control of the outbreaks of the Pine White butterfly is impractical because of the immense areas infested and the expense involved. Hope must be based on the history of previous outbreaks, when the natural enemies of the insect have always checked its ravages.

So far as is known to the author, the only thing timber-owners can do is to keep a close watch upon the infested areas, and to stamp out, by felling and destroying, all trees found to have been attacked by the bark beetles.

But, you may ask, "Why is it that the Pine White butterfly only appears in epidemic form at irregular intervals?" And the logical answer is that a certain number of the cater-

pillars are always to be found in certain areas; also, it may be safely asserted that an epidemic of a minute fungus has so preyed upon the ranks of the various ichneumon flies, which are the natural enemies of the caterpillars, that Nature has been unable to maintain her balance. Consequently, freed from the molestation of the ichneumons, the caterpillars of the Pine White butterfly have temporarily achieved a superiority of numbers.

But why the parasitic fungus preying upon the enemies of the Pine White butterfly? Because each year that there has been an epidemic of the Pine White butterfly the atmospheric conditions have been more than usually favorable to the fungus, which is a microscopical vegetable growth, seen by the naked eye as a fine, grayish white powder upon the bodies of the flies.

[The author gratefully acknowledges much of the information used in this article to the courtesy of Mr. Harry C. Shellworth, land agent, Boise-Payette Lumber Company, Boise, Idaho; Dr. J. M. Aldrich, Associate Curator, Division of Insects, Washington, D. C.; Frank E. Watson, Assistant in Lepidoptera, American Museum of Natural History, New York City; James C. Evenden, Forest Entomologist, Forest Insect Control Station, Cœur d'Alene, Idaho, and J. McDunnough, Chief, Division Systematic Entomology, Ottawa, Canada. The specimens from which the illustrations were made were courteously loaned by Mr. Carl Heinrich, specialist in Forest Lepidoptera.]



# Our Ornamental Mountain Laurel

BY IRVING W. PAYNE

Member of the American Society of Landscape Architects

Photographs by Guy Collins

OF THE many hardy species of our broad-leaved evergreens, probably none is more familiar to the majority of plant admirers than the Rhododendron—one of the showiest of our hardy popular flowering ornamental shrubs. Few, however, are equally familiar with its beautiful relative, the Mountain Laurel (*Kalmia latifolia*) Linn., which grows under similar regional conditions of soil and moisture requirements.

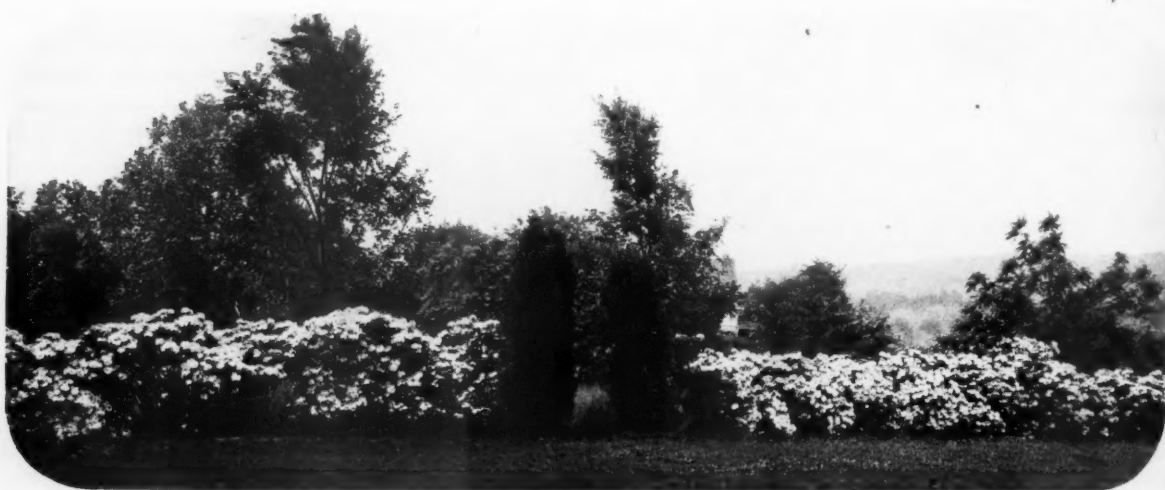
The natural habitat of this attractive native plant, botanically classified under the Ericaceae family, ranges from New Brunswick southward to Florida and westward to the States of Ohio and Tennessee; but it is seen in its greatest abundance growing wild in the mountains of the Carolinas—the “Land of the Sky.” Here it thrives most luxuriantly on the high, cool, moisture-laden slopes of the Southern Appalachians, especially in the “Pink Beds” in the region about Mt. Pisgah, one of the scenic gems of the Blue Ridge mountains, where in May the gorgeous rose-pink colored flowers may be seen spreading for miles in an endless profusion of color until it is lost in the distant panorama of forest, stream, and mountain peak. Its natural growth, however, is not limited to the shaded, moist, peaty soils, or swampy sites, commonly associated with many of our broad-leaved evergreens, where the soil is distinctly of an acid character, since it



A FLOWER CLUSTER OF MOUNTAIN LAUREL, SLIGHTLY REDUCED IN SIZE. THE DELICATE, WAXY, ROSE-PINK FLOWERS, “FLECKED” WITH REDDISH PURPLE, ARE OFTEN LIKENED TO A FAIRY’S PARASOL. THE LITTLE PINK, STAR-SHAPED FLOWER BUDS LOOK LIKE THE PARASOL PARTLY FURLED

is also found growing on well-drained, open, clayey-loam soils occupied by “oak barrens”—areas which have been denuded of their former tree growth by forest fires. Especially is this true in western Maryland, where the Mountain Laurel grows, exposed to full sunlight, from four to five feet in height, showing its adaptability to withstand wide extremes of sunlight and shade conditions.

In habit the Mountain Laurel is found naturally growing wild as a shrubby, clump-like plant with rounded outlines, to a height ordinarily of from three to ten feet



WHERE THE MOUNTAIN LAUREL IS FOUND GROWING EXPOSED TO THE FULL RAYS OF THE SUN, SHOWING ITS ADAPTABILITY TO FLOURISH UNDER TRYING CONDITIONS OF SOIL AND MOISTURE. IT IS BEAUTIFULLY ADAPTED TO INFORMAL OR EASY FORMALITY IN CONNECTION WITH THE PLANTING OF COUNTRY ESTATES WHERE A BORDER PLANTING IS REQUIRED, OR WHERE IT IS DESIRED TO ADD A DISTINCTIVE TOUCH OF COLOR TO THE FOREGROUND OF A TREE PLANTING



and occasionally slightly higher, but more often three to six feet, according to the site conditions. Depending upon the season, soil and light conditions, the leaves vary in color from a light to dark green above with a rusty yellowish green below and average three to four inches in length, with sharply pointed tips. The flowers, as will be observed from the accompanying photograph of a typical flower cluster, appear in compound corymbs, the individual blossom being one-half to three-fourths of an inch in diameter. The corolla ranges from a delicate rose or shell pink to a blush-white color, gradually fading with the advance of the season to a distinct white, but still retaining its reddish purple "fleckings" within the individual petals of the flower.

color—qualities which endear it to every true lover of native plant material. This, added to its comparative freedom from insect pests and fungous diseases, make it a particularly desirable plant where individuality of form, profuseness of bloom, and rich, dark growth of evergreen leaves is desired for specimen or informal mass planting at a relatively low cost.

Specifically considered in relation to landscape design, its marked adaptability to informal border or easy formal planting in connection with country estates, home grounds, or park-like areas, where a low planting is required to delimit or accentuate a view, is seen to good advantage in a landscape composition in which it is desired to add a distinctive touch of color to the foreground of a deciduous



WHAT COULD BE MORE SATISFYING OR RESTFUL THAN TO COME UPON THIS BILLOWY MASS OF FLOWER AND LEAF, WITH COUNTLESS STAR-SHAPED BUDS PATIENTLY AWAITING THEIR TURN TO BURST FORTH INTO BLOOM AND LATER GLADDEN THE HEART OF THE OWNER OF THE HOME SEEN IN THE BACKGROUND

In appraising the ornamental value of our native Mountain Laurel in landscape planting, it naturally follows as a corollary that its relative value as a decorative plant must necessarily be measured in terms, not only of its adaptability in mass, texture, and color in relation to landscape planting design, but also in its behavior under the conditions imposed upon it by reason of its use—in short, its horticultural requirements for successful transplanting and subsequent growth. Generally speaking, its ornamental value is best appreciated when we consider its unusual hardiness, under the average conditions of soil, moisture, and light requirements usually encountered in planting, in combination with its beauty of form and

or evergreen planting. In this particular requirement it may be used as a hedge or in an informal group, so arranged as to secure the maximum advantage of seasonal variation in leaf and flower in contrast with a higher background of evergreen or deciduous planting or combination thereof, each of which may consist of trees or shrubs. These attractive contrasty effects may be further secured in several ways, viz: through varying the general background by creating definite differences in height, varying the mass outline of one or more plants, or by the use of carefully considered texture and color combinations of leaves or flowers, so designed as to produce a desired composition at a given period of the year. Pleasing plant-

ing compositions may be secured with Mountain Laurel by using it in groups as a "facer" to taller related groups of evergreen shrubs and trees—*e. g.*, Great Laurel (*Rhododendron maximum*), Rhododendron (in variety), Evergreen Privet (*Ligustrum lucidum*), Holly (*Ilex*), and Hemlock (*Tsuga*)—by a careful selection of planting combinations which, to secure the most harmonious results, must involve the use of transitional differences in texture and color as related to leaf and flower and their carefully considered adaptation to the varying conditions of soil, moisture, light, and climate, which vary necessarily with the region where used. Its use also in combination with Flowering Dogwood (*Cornus florida*) along the banks of streams, or as an underplanting among deciduous trees, where it lends itself very successfully, must not be overlooked, especially where shade is encountered.

Its treatment in rigorous climates as an ornamental plant, where it is subjected to cold, drying winds for continued periods, when even the most hardy evergreens are liable to injury by excessive transpiration of water through the stomata of the leaves, suggests its use in combination with border plantings of pines, spruces, and hemlocks, which assist in forming a partial wind-break, especially on sites ordinarily exposed to the full force of heavy winter winds.

In cultivation the Mountain Laurel, when secured from sites open to the direct rays of the sun, shows its marked adaptability to withstand adverse soil conditions on being transplanted to sandy or clayey-loam soils, one exception being that it will not thrive successfully in soil strongly impregnated with lime unless this condition is ameliorated by the generous use of peat or leaf-mold, since it will not live, even in an ordinarily fertile garden soil, where the reaction is neutral or alkaline.

The recent experiments, covering several years, by Dr. Frederick V. Coville, Botanist of the United States Department of Agriculture, show in a marked manner that practically all plants of the heath family can be made to thrive in ordinary soils by the use of aluminum sulphate. Dr. Coville's experimental work has shown that aluminum sulphate, when applied to an ordinary soil, is an inexpensive and effective method of obtaining an acid soil from an alkaline or neutral soil. In the case of rhododendrons, where the soil has thus been treated, the stimulation in growth has been very great, as much as 250 per cent increase in the diameter of the rosettes of seedling rhododendrons having been secured. Crude aluminum sulphate, as used in the chemical industries, is comparatively inexpensive in large quantities and it may be secured from dealers in chemical supplies at approximately \$5 per hundred pounds. Inasmuch as the use of this chemical is still in its experimental stages, a limited area of the planting bed may be set aside and treated with aluminum sulphate in the proportion of one-half pound to a square yard of soil, so that its behavior may be observed.

Considering further the cultivation of Mountain Laurel, it is well to excavate the proposed planting bed to a depth of one to one and one-half feet, securing drainage when

necessary by the addition of three or four inches of coarse sand or fine gravel at the bottom. Uniformly good results will be secured by mixing the soil to be used for planting in the following proportions: one part leaf-mold, peat, or well decayed leaves; one part wood's earth or some reliable commercial humus, and one part sandy or clayey loam, thoroughly mixed together, to secure proper drainage and the necessary plant food.

In transplanting this plant it may be easily moved in either spring or fall, and especially in August, at which time the new spring growth has had a chance to "harden off." In fact, it may be successfully transplanted when in bloom if care is taken to keep the roots moist and the plant protected from the wind and the hot rays of the sun by a suitable covering during the time the plant is being moved to its new site and for a couple of days thereafter. It should be remembered that many of the failures in planting evergreen as well as deciduous plants is too often traceable to a lack of a proper amount of water when planting, a thorough "puddling" of the roots in a "soupy" mixture of clay and water being necessary where the plants are to be long out of the ground during the time intervening between digging and planting. It is well to consider also that a good firming of well prepared soil about the smaller fibrous roots is essential to remove any "air pockets." If this condition is not carefully adhered to, it may be expected that the necessary capillarity of the soil water will be slow in becoming established, if at all, which usually results in the loss of the plant.

Further, it should be understood that a proper soil mixture, as above stated, is necessary to secure the best results, since the plant rootlets must have not only drainage, but also air. This means that, through proper soil mixtures, the plant is better able to secure water from below by capillarity, the actual moisture, however, being supplied to the plant by hygroscopic water, which in non-technical terms is the thin film of water immediately around each individual soil particle, however small. It follows, therefore, that the remaining spaces between the soil particles allow the necessary air to be secured by the plant and permits the excess free water to be drained away from the plant roots. Subsequent to planting, it is desirable to conserve the needed moisture about the plant roots by adding a mulch of well-rotted leaves or wood's earth. In the late fall a three- or four-inch mulch may be added as a further protection, and in the following spring this mulch may be carefully dug into the soil and a light mulch added, as before.

To secure the best results in the growth of Mountain Laurel, it is advisable to remove the seed-balls immediately after flowering is past, so that the plant food may be diverted to new leaf and flower buds for the coming year. This slight amount of extra care will be more than compensated for by the added luxuriance of leaf and flower the succeeding season, the beauty of which will emphasize the true ornamental value of this well-nigh indispensable flowering evergreen—our native Mountain Laurel.



## Barnjum—The Apostle of An Embargo

BY WILLIAM J. McNULTY

**T**HERE is a no more picturesque or active figure in the cause of forest conservation than Frank J. D. Barnjum, of Annapolis Royal, Nova Scotia. For

more than twenty-five years Mr. Barnjum has been devoting his time and money in advocacy of what he believes will promote forest conservation. Just at present he is the principal target for a barrage of criticism from his fellow-Canadians on one hand, and on the other he has been the recipient of many verbal bouquets from those who see eye to eye with him.

Mr. Barnjum, a wealthy lumber and pulpwood operator and president of one of the pulp manufacturing companies of eastern Canada, was instrumental in bringing before the Canadian House of Commons a measure calling for an embargo on exportation of pulpwood from Canada to the United States. He explained that this bill, if passed and enforced, would be of inestimable benefit to the forests of Canada. Instead of passing the bill as presented originally, the members of the Canadian legisla-

tive body altered the measure so that an embargo was made legal, and authorizing the appointment of a commission to investigate the entire question.

The report of the Royal Commission on the Pulpwood Embargo, recently filed, makes no specific recommendation on the establishment of the embargo, but points out that its important finding concerns other causes of forest depletion. It leaves up to the Governor the decision on the establishment of the embargo.

No one has been coupled up closer with the embargo agitation than Mr. Barnjum, and a history of his activities is just now especially timely.

Mr. Barnjum asserted that the work of the royal commission was futile. He declared it was a waste of money, as he claimed sufficient data was available in the Department of the Interior at Ottawa to enable the commission to reach a finding. Instead of pursuing this course, the commission announced that sittings would be held from coast to coast in Canada, and that all interested would be privileged to appear at these sittings and express



FRANK J. D. BARNJUM



their views on the proposed embargo and on forest conservation in general. The commission was empowered to treat the entire forestry conservation question, with particular reference to pulpwood.

From the inception of the hearings the preponderance of sentiment, as expressed by witnesses before the commission, was against an embargo. The bulk of the witnesses declared that Mr. Barnjum was actuated by mercenary purposes in his advocacy of the embargo. It was pointed out that he was one of the heads of a concern engaged in the shipment of pulpwood to the United States for some years. It was also pointed out that the leader of the pro-embargo faction was the president of a Canadian pulp-producing organization, and that United States pulp and paper manufacturing companies were paying prices for pulpwood that were 100 per cent higher than the Canadian companies.

Mr. Barnjum was invited to appear before the commission, the members of which arranged a sitting in his home town, Digby, with the sole objective of hearing his views on the entire question. But Mr. Barnjum consistently refused to testify or even attend one of the sittings. He contended that the commission was appointed to waste money, and what he would say would influence them very little. He declared the government rendered useless the provisions of an embargo, should one be decided on by the commission, by a secret order in council, under which contracts for up to ten years were immune from the embargo.

Mr. Barnjum has been accused of endeavoring to force down the price of pulpwood. Delegations of farmers have waited on the royal commission and have presented petitions, signed by thousands of fellow-farmers, protesting against the embargo on the ground that such a radical measure would drive hundreds of thousands of men from the soil. For years, selling pulpwood to United States buyers has been the Canadian farmer's most profitable side line.

The consensus of opinion among the witnesses before the commission was that the fires have destroyed more trees than United States pulp and paper companies will ever buy, and that a more rigid means of fire protection must be devised if Canada's natural resources are to be reclaimed.

And yet Mr. Barnjum believes an embargo on pulpwood, minus the order in council, would be an effective means of forest conservation. He declares that at the present ratio Canada's forests will not last another ten years. He charges United States pulp and paper companies with removing Canada's pulpwood trees by the

wholesale in recent years. He claims the companies have curtailed their United States cutting operations and are devoting practically all their efforts to removing the pulpwood from Canada. In order to effectively accomplish this, it is his opinion that large sums are expended on propaganda in Canada.

When accused of trying to foist an embargo on Canada to benefit himself and associates, Mr. Barnjum says he expects criticism, but states he has retired from the money-making sphere. He says he will devote the balance of his life to forest conservation and plans on spending most of his wealth in the execution of his ideas for conservation of trees. As a preliminary step, he offered a prize for the best essay of forest conservation submitted by a Canadian. Over one hundred thousand contributions were received by him in this contest. In promoting this competition Mr. Barnjum shouldered the entire financial burden.

In his advocacy of more stringent fire protection he has expended many thousands in educational lectures. He has maintained offices in Annapolis Royal and in Montreal, from which are mailed weekly thousands of letters pointing out the need of forest conservation. Nearly every newspaper published in Canada receives a letter each week, and often twice weekly signed by Mr. Barnjum. These letters contain from three hundred to fifteen hundred words, all based on the efficacy of forest conservation and outlining means that should be adopted to curb fires.

For his own Province of Nova Scotia Mr. Barnjum has offered to supply a provincial forester at no cost to the province. He has also offered to pay the entire cost of a committee of business and professional men to tour Canada's forests from coast to coast, in his effort to prove that in ten years the forests of Canada will be reduced to the minimum if the existing rate of tree-removal is continued. Mr. Barnjum is also planning on instituting forest-conservation weeks in the public schools of the Dominion, as a means of educating the young to the necessity of conserving the forests. He may make his forest-conservation contest a yearly fixture, so successful was the first competition. It is estimated that Mr. Barnjum spent more than fifty thousand dollars in forest-conservation programs during the past three years. He reiterates he will devote the balance of his life entirely to forest conservation. There is no doubt that this forest philanthropist thrives on criticism, for his activities in behalf of his pet hobby have been enlarged since he was deluged with censure.

## TREES AND SNAKES

By S. J. RECORD

IN OLDEN days it was believed that snakes had special antipathy for certain trees. Thus, in "Prince Pennilesse," it is said that "the touch of an ashen bough causeth a giddiness in the viper's head," while in "A Thousand Notable Things" Lupton says: "A serpent doth so hate the ash tree that he will not come nigh the shadow of them." Sayings of like nature are to be

found in the works of Plutarch, Pliny, Erasmus, and many others. The smell of cedar wood was reputed to drive away "serpents and all manner of venomous worms," just as it is now supposed to afford protection from moths. It was also claimed that "there is no serpent that can breed in the box tree, for the hardness, nor will build in the cypress tree, for the bitterness."



# Some Trees Worth Knowing

BY DR. F. D. SNYDER, F. R. G. S.

THE man who said "Plan to Plant Another Tree" should have a monument erected for him; for trees, like our wild animals and birds, are being slowly but surely exterminated, and the discovery will come when it is too late, for it takes time to grow trees. Many trees that we live with every day have been growing for centuries.

There are many interesting trees that one could write about, but the object of this little article is to tell of a few very interesting trees of our warmer climates.

Found only in our southern climates, the tree known as the Banyan tree, of which the United States has two

noted specimens, is probably one of the most interesting growing anywhere in this country.

The Banyan tree is a native of India, but we have two beautiful specimens—one near Miami, Florida, and one at Key West. Those two unique trees are well worth going a long way to see.

The Banyan is a species of fig, but it has the peculiar habit of throwing down roots from its branches. These extend downward until they touch the ground, where they take root and become a stem to the tree, in this manner spreading over a great surface of ground and enduring for ages. In their native country the branches



THE MANGROVE, ALIAS  
"THE LAND-MAKER"

Showing some of the open root system that catches debris and builds new land. The insert at the right is a close-up of the uniquely rooted seeds, ready to anchor in the mud when they drop in the water below.




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But the glory of trees is more  
than their gifts:  
'Tis a beautiful wonder of life  
that lifts  
From a wrinkled seed in an  
earth-bound clod,  
A column, an arch, in the tem-  
ple of God,  
A pillar of power, a dome of  
delight,  
A shrine of song, and a joy of  
sight.  
Their roots are the nurses of  
rivers in birth;  
Their leaves are alive with the  
breath of the earth;  
They shelter the dwellings of  
man, and they bend  
O'er his grave with the look of  
a loving friend.

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—Van Dyke.



Photograph by Dr. F. D. Snyder

THIS IS A SECTION OF WHAT  
IS PROBABLY THE LARGEST  
BANYAN TREE IN THE UNITED  
STATES—THE ONE AT KEY  
WEST

are usually covered with monkeys and enormous bats, for the monkeys eat both the fruit and leaves. The fruit is of a rich scarlet color, growing in pairs from the axils of the leaves, and is about the size of a cherry.

The Banyan growing in Miami, Florida, is a beautiful specimen and in perfect condition. It is said that at least fifty children could easily hide behind its numerous root attachments. The tree growing at Key West has long been considered the finest Banyan tree in this country, but when I saw it last it had been considerably damaged by a tropical hurricane. It is,

however, still one of the marvels of the vegetable kingdom.

Another tree, known as the mangrove, functions uniquely. This small tree, or shrub, seems to be of little account, but it is a builder. It is a builder of islands—yes, of continents. It is the one tree that is able to take from the ocean along its shore and make land that can in time become inhabitable by man, and even become cultivable soil, able to produce for man.

The mangrove is found in great numbers on the marshy coasts of the tropics, where in many cases it forms immense and impassable stretches of arched roots. It grows only in salt or brackish water, and when its island-building activities have resulted in the formation of solid ground and in the exclusion of salt and brackish water, it dies and its place is taken by other forms of vegetation able to find a footing and thrive.

The tree forms a great mass of tangled aerial roots, which shoot down from the trunk and limbs into the water and mud below, in time forming new trees and presenting a barrier which catches and holds a vast mass of floating debris, so building in the course of time firm land.

The mangrove, of which there are at least a half dozen different kinds, grows only in tidal marshes, and as soon as the water becomes fresh, or nearly so, it cannot live.

The tree is remarkable for its peculiar method of seed germination, the seeds sprouting while yet attached to the parent tree. Then, when rooted sufficiently, they drop into the shallow water and soft mud beneath, where they readily take root and soon grow into another tree. Strange to say, the rooted seed, being heavier at the bottom, will almost always strike upright in the mud, as if set out by man.

## Forest Fires in the West

FROM information sent from the field directly to AMERICAN FORESTS AND FOREST LIFE, there is given below a brief summary of the forest-fire situation in the western part of the United States up to September 15. On that date the situation which has prevailed for almost six months throughout the Pacific Coast states was little changed, although the fire-fighters had succeeded in getting practically all fires under control, excepting in the State of California, where one 15,000-acre fire and a number of other smaller fires were not yet under control. Although light showers in Montana and Idaho had given some relief, the long drought which has characterized the Rocky Mountain and Pacific Coast states had not been broken at the time last reports were received.

It is, of course, too early to present complete or fully authentic figures on the damage done by the western fires this season. As a matter of fact, the period of highest risk in the Pacific Coast states—California, Oregon, and Washington—is usually September, so that it is possible that some of the greatest losses are yet to be counted. Loss figures given at this time are merely indicative of the great damage which the western fires are causing, and must, of course, be considered incomplete.

Early in September, total losses outside the National Forests, including standing timber, logs, equipment, and settlers' improvements, approached \$1,250,000 for the states of Montana, Idaho, Washington, Oregon, and California. Loss figures for National Forest areas have not been compiled, but, judging from control expenditure which in California alone had totaled \$425,000 up to the latter part of August, and from the news of 1,168 fires within California National Forests up to August 20, the Federal losses for the Pacific Coast probably will total more than \$2,000,000. Rocky Mountain and Lake states losses are not available. One fire on the Minnesota National Forest destroyed \$21,000 worth of timber and property, and several Colorado fires have been disastrous.

In Arizona and New Mexico, which are not usually thought of as heavily timbered states, but where there

is a mountain stand of 23 billion board feet of saw timber and more than 20 million cords of fuel wood, the fire season has been severe. Previous to August 20, Arizona had 453 fires on National Forests—an increase of about 30 per cent over the previous five years' average. New Mexico has approached the average in number of fires with an abnormally dry season. No damage figures are available.

Total western losses up to late August, according to the best data to be secured, may be estimated at around \$4,000,000 in timber, buildings, and miscellaneous property, resulting from a total of nearly 6,000 separate fires, 85 per cent of which were man-caused.

As pointed out by Mr. Henderson's article on "The Forest Fire War in California," published in the September number of AMERICAN FORESTS AND FOREST LIFE, California has been the scene of greatest risk and loss, as well as that of the most spectacular fire-prevention campaign. At one time in July as many as eight large conflagrations raged out of control in a single day with 2,000 men fighting the flames.

Because of the high risk and the increasing number of camper and smoker fires, more than ten million acres of National Forest land were closed to public use, except under official permit. Restrictions on camping and smoking were placed on an additional 2,500,000 acres. Similar closures were made in Oregon and Washington. Throughout late August and September, California had a special emergency force of rangers from Arizona and New Mexico and seven detachments of troops used for patrol. One outstanding publicity feature was the message carried by 800 mammoth billboards scattered from the Oregon line to Mexico. This advertising space, valued at more than \$100,000, was contributed by two public-spirited companies.

Reports received from state, Federal, and private forest officers alike through the five Pacific states express the common belief that the 1924 season teaches the necessity of more police restriction.

# Vancouver's Historic Apple Tree

By GLENN RANCK

VANCOUVER, Washington, in 1925, will hold a centennial celebration throughout the summer season, with historical pageants—Indian and pioneer life depicted—commemorating the settlement one hundred



Photograph by "Marcell"

## THE VANCOUVER APPLE

The tree has been nominated for a place in the Hall of Fame for Trees, by Glenn Ranck, President of Clarke County Historical Society, and C. C. Hutchins, Secretary of the Chamber of Commerce, Vancouver, Washington.

years previously at Vancouver, Washington, of the Hudson Bay Company. In connection with this, an old apple tree will be of especial interest. It is the most historic tree in the State of Washington, having been planted in 1826, within the boundaries of Fort Vancouver by a member of the Hudson Bay Company, who brought the seed from England. The accompanying photograph was made of this tree, ninety-six years of age and in full bloom, in the spring of 1922.

## Legend of the Fort Vancouver Apple Tree

At a dinner party in honor of officials of the Hudson Bay Company just before their departure from London for Fort Vancouver in 1826, a young lady playfully placed her apple seeds in the pocket of a gentleman sitting at her side. The seeds were carefully planted under the watchful eyes of John McLoughlin. One of the seeds germinated and the sprout of a promising apple tree—the first apple tree on the Pacific Coast—soon made its appearance.

After several years it bore one apple, which, when ripe, was picked by Governor McLoughlin and carefully cut into seventeen slices and one precious slice of luscious fruit was served to each person at the governor's table. The next year the tree bore twenty apples and it is still living and bearing fruit. The first account of this historic tree was written by Mrs. Marcus Whitman, in her journal, on her visit to Fort Vancouver in 1836, when the tree was about ten years old.

In eighteen hundred and twenty-six, on London's famous Strand,  
On the eve of their departure for Oregon's\* distant land,

Hudson Bay officials sat in festive banquet room,

With wives and mothers dear, and sweethearts in their bloom.

They drank long life to ladies bright,

And to their lovers tall;

While glasses clinked and laughter light

Rang round that stately hall.

Fair Kate unto her lover true,

Then blushing did say:

"These magic apple seeds take with you,

When at dawn you sail away:

"And, that they may be a sign

That you'll love me evermore,

"Pray plant these true love seeds of mine

On far Columbia's fertile shore."

And so Love's apple seeds were carried to this far western slope;  
And here they thrived and prospered beyond the lover's fondest  
hope:

In far away Vancouver Fort, to Indians' wondering eyes,

A lordly apple tree soon flung green banners to the skies.

Its offspring now are scattered wide

O'er the broad Pacific Coast;

Their luscious apples are our pride,

The orchard's queen and poet's boast.

Their choice fruit they are lending,

With cool shade for you and me;

While thousands we are sending

To old London o'er the sea.

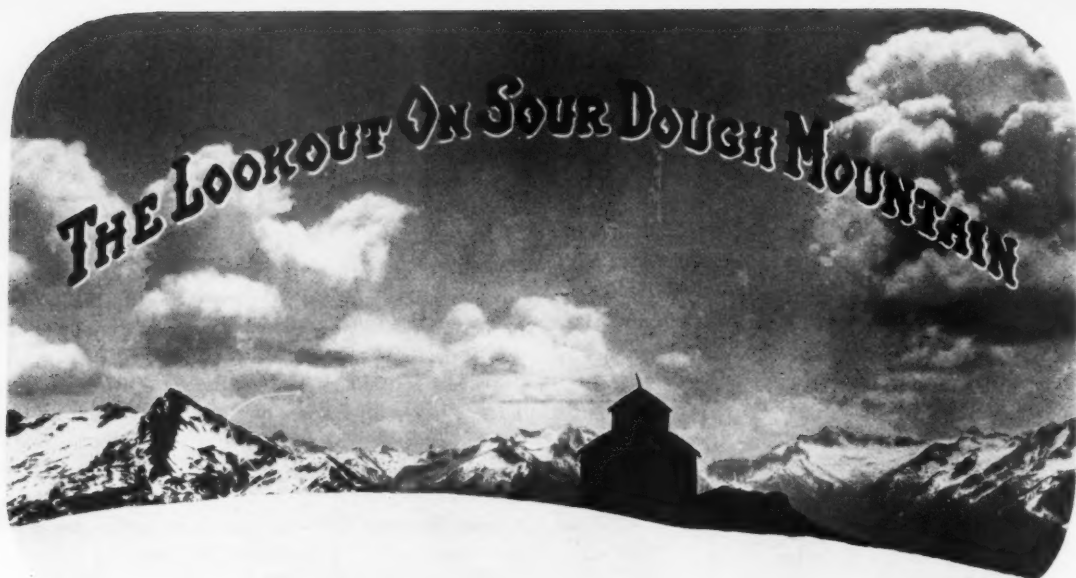
So now we bless the lady fair,

And bless her lover tall,

Who planted here, with tender care,

Sweet apples for us all.

\* When the settlement by the Hudson Bay Company was made in 1825, the territory contained in the present states of Oregon and Washington was all known as Oregon.



## I. My Little Furred and Feathered Friends of the High Country

By C. H. PARK

**T**O BEGIN WITH, the Forest Supervisor and the District Ranger accompanied the new fire lookout to his post of duty, a bare rocky flat 7,000 feet above the sea, from which he could look down upon a world of rugged mountains gullied with great valleys and canyons. The rocky flat was the top of old Sour Dough Mountain, and the space available for summer living quarters was so small that it barely permitted the construction of a tiny lookout-house which the government later built upon it. The lookout's first home here at the top of the world was a 7 by 9 tent, with a strong fly over it, both being fastened down with heavy stones to keep the shelter from being blown away. I was told that it was expected that the Fire-lookout Man would spend only nights in his tent and such time as was needed to cook his simple meals, and

at all other times he must faithfully locate and report any fires that might be set by lightning or by careless fishermen, hunters, or campers.

Here on the top of old Sour Dough Mountain, which seemed to thrust its rugged head into another world, was

my solitary habitat for many months. The point had been selected with special care. Some years before the Forest Supervisor of the Mount Baker National Forest, formerly the Washington National Forest of Washington, had made extended explorations with a party of rangers and fire experts for the purpose of locating the most desirable fire-lookout point from which the great Skagit River watershed could be watched during the forest-fire season. Jack Mountain, an extinct volcano, Ruby, Stetattle, Sauk, and Sour Dough Mountains were all



"NEARLY ALL BROWN BUT A SMALL PATCH OF WHITE"



climbed. It was found that Sour Dough Mountain over-looked more of the valley, and, furthermore, a horse trail could be built almost to the top. It was finally decided, therefore, to station a fire lookout on its top for a season or two before deciding upon building a permanent lookout-house, an undertaking that would be both difficult and rather costly.

How often are preconceived ideas erroneous! We unconsciously form impressions of a place we are to visit for the first time, only to have them swept away like fog before the wind when we actually arrive at our destination. I knew in advance that the lookout was far above timber-line, in a land of almost perpetual snow; that the only water obtainable was from melting snow; that the station itself was located close to a glacier and an alpine lake where icebergs could be seen floating away as they broke from the side of the glacier during the warmest days of late August. I assumed that I would sit there on a great rock in the sky, alone for days, weeks, and perhaps months, peering down upon the mountains for sight of curling smoke. I thought, too, as a matter of course, that there would be no birds to enliven

the solitude with their presence and song, nor animals that I might study during leisure moments when I was not looking for fire in the woods so far below. Never was I more mistaken in preconceived impressions.

In still another respect was I greatly mistaken. I supposed that I would have to stay from dawn until dark

on the lookout, ever on the watch for fires. However, almost the first thing that the District Ranger did after accompanying me to the station was to take me on quite a trip west along a ridge to the highest point on Stetattle Mountain, showing me the fine body of timber in the upper Big Beaver Creek watershed, which could not be seen from the lookout station. He instructed me to take this trip once each day, preferably during the forenoon, after making certain that no suspicious smoke could be seen from the lookout-house itself. Again during the afternoon I was



"WHAT THE BIRDS LIVED ON WAS A WONDER, FOR THE COUNTRY WAS QUITE BARREN OF INSECT OR PLANT LIFE"

to make a trip due north to look over a portion of the Upper Skagit River basin, to make sure there were no fires just south of the international boundary line, and it was mostly during these short scouting trips that I met and enjoyed the companionship of many small animals and birds.



"I ASSUMED THAT I WOULD SIT THERE ON A GREAT ROCK IN THE SKY, ALONE FOR DAYS, WEEKS, PERHAPS MONTHS, PEERING DOWN UPON THE MOUNTAINS FOR SIGHT OF CURLING SMOKE"



A "HOOTER" IN PLAIN SIGHT

The ducks and geese had long before passed over in their annual migration to the North Land, and during the first two weeks of my three months' stay on Old Sour Dough I saw but an occasional American or bald-headed eagle and other high flyers of the hawk family, though Poe's bird of ill omen, the raven, contributed but little to the cheerfulness with his raucous caw.

But as the summer season advanced and as the ice and snow slowly retreated before the sun's midday attacks other birds appeared almost miraculously from nowhere in particular, although it was evident they had been somewhere near all the time. These were the little water ousels, that disported all day long on the little lake formed by the melting snow, and the beautiful ptarmigan, whose home is above or very near timberline the year round.

A couple of these ptarmigan appeared early one morning, each sitting on rocks close by, and I took them for male and female, but later it appeared they were both mother birds. Each brought out a family of the smallest and cutest chicks that one could wish to see. The ptarmigan is rather a trusting bird, and by never making any sudden movements and by placing bread crumbs and broken bits of crackers nearer and nearer the lookout-house the two old mother hens were tamed to such an extent that one could get quite close to them. I declared war on the hawks when I discovered that they were very fond of young ptarmigan, and killed several before they came to the conclusion that my protective interest did not extend to predatory birds, after which they gave the lookout a wide berth, with the re-

sult that two families of ptarmigan were raised to maturity with the loss of but two or three chicks each.

The ptarmigan are nearly, if not quite, all pure white during the winter time, but at the time I was living on Old Sour Dough Mountain their plumage was mottled brown and white. But whatever the proportions, I noticed that a ptarmigan was a most difficult object to locate once the eye had strayed away from it. That this protective scheme of coloring fools the sharp-eyed hawks I had plenty of proof. Many a time before I began to shoot all hawks on sight I saw a hawk fly directly over and but a few feet above a ptarmigan, but he could not see the bird. When a hawk was seen by the mother birds, and they discovered it much before I did, they would give a low chirp of warning and all the birds, both big and little, froze into immobility, with no attempt whatever to hide under something, until the hawk had come and gone. I am quite certain that those two wise old mother ptarmigans pooled their interests for better protection, for one of them was always on the alert.

In the mornings, during the fall months, just before daybreak, the ptarmigans displayed a remarkable trait in acting as community alarm clocks! Judging by the sounds, they all tried to wake each other, and every other living thing in their vicinity, by the greatest amount of crowing and chattering of which they were capable.

Just what the birds lived on was a wonder, for the country was apparently quite barren of insect or plant life, but they seemed to grow and thrive quite as well as did other birds at lower elevations. But if one wonders what they can find to eat during the summer, he marvels



"BUT I WILL SAY THIS FOR THE WOOD RAT: IT TAKES SOME KIND OF A METAL CONTAINER TO KEEP HIM OUT." HERE THE CAMERA CAUGHT HIM APPARENTLY TRYING TO USE A CAN OPENER!

still more how they manage to live on during the long winter months, when everything is covered with snow, waiting for the warm sunshine to come again.

The blue grouse, the "sooty grouse," as he is referred to by the naturalists, or the "hooter," as he is called by all woodsmen, inhabited the mountain side about midway between the high homes of the ptarmigan and the ruffed grouse of the low country. As the Lookout Man made his rounds one morning, a bunch of three blue grouse flew into a tree and had their pictures taken. As

a ventriloquist the "hooter" excels all other birds of my acquaintance. His loud booming far-carrying mating call seems to come from so many directions that search for him is difficult, until one by much practice learns to place the calls. That their calls do not subject them to much additional danger from the hawks seems to be proved by the fact that the roosters will stand

out in plain sight and hoot for hours without being molested. I remember one morning flushing a big flock of the birds, a mother and some eight or ten young ones, which flew up into a big bushy mountain hemlock, each bird standing out in plain sight. A hawk appeared from nowhere, made a dash for one of the grouse, and every one of the flock disappeared in a twinkling, hiding in the thick foliage until neither the hawk nor I could see as much as a feather of one. Wishing to make certain observations, I threw many stones into the tree, but not a bird consented to be frightened out of his concealment. The hawks try to scare them out by striking the limbs with considerable force and plenty of noise, hoping to startle one of the birds into leaving its hiding place, but I never saw the ruse succeed. The sooty grouse may not be very wise in some respects, but to survive at all he must, and evidently does, know the hawk tricks pretty thoroughly.

The little striped chipmunk lived on top of the bare rocky ridge that I traveled each morning, and, beyond

being of most diminutive size, he seemed as well nourished as his larger cousin lower down the mountain, though living must have been a precarious business at times. This tiny chipmunk was easily tamed. In fact, he never appeared very wild, probably thinking that he was too small to be bothered by any one as large as a man. Nor was this little friend at all troublesome. He never came into the lookout-house, as do the other chipmunks, for all I tried in many ways to get him to do so.

I had had experience before, lots of it, too, with wood

rats. Westerners call them "pack" rats or "trade" rats. They are always moving into a cabin as the owner moves out, and it doesn't matter to Mr. Rat whether the owner intends to leave permanently or for a short time. The wood rat, besides being a dirty and ill-smelling creature, has a most reprehensible habit of carrying things off, anything shiny seeming to be pre-



"THREE GROUSE FLEW INTO A TREE AND HAD THEIR PICTURES TAKEN, WITH OLD SOUR DOUGH FOR A BACKGROUND"

ferred. Sometimes he brings things back, but other things, not those he took away, hence his name of "trade" rat. On one occasion I stopped for the night with a hunting party in an abandoned cabin. It had rained that day, and in cleaning and oiling my rifle I had taken all the cartridges out of the magazine and placed them, with those from my pocket, on one of the logs of which the cabin had been built. The next morning every cartridge was missing, and the rest of the party gleefully elected me for cook and general handy man around camp, since I could not hunt without cartridges for my gun. Later, in looking for another needed cooking utensil, every cartridge was found in an old frying pan overhead in an outbuilding used for a wood shed! That rat had had lots of fun hearing those metallic cartridges tinkle down upon each other into that old rusty pan.

Upon entering the lookout-house on an initial spring trip in taking up supplies I found a pack rat's nest in the fire-box of the small stove the station boasted. Of course,



the nest had to be destroyed. Not at all dismayed, that rat had another nest nearly completed by the time I again got back, three days later, with another load of provisions. Fortunately I had hung up my provisions with a No. 9 telephone wire to the rafters and nothing had been disturbed. But that rat became such a nuisance that I determined to trap him, which was easily done, wood rats seeming to have no fear or knowledge of traps. I had no wish to kill him for the damage he did, but rather thought I might tame him, and though I never expected him to be a pleasant companion, still I wanted to observe his habits, and so saved his life.

He didn't tame very readily, but he did learn some things, mostly of a mischievous nature. His industry knew no bounds in rolling tin cans of provisions around, no doubt liking the noise they made, but probably wishing he could find some way to open the cans closed to him by the tin covering, too tough for his teeth to gnaw through. But I'll say this much for a wood rat—it takes some kind of a metal container to keep him out. Take a good look at my picture of the rat sitting on a can of fruit with a real can opener in his paws, apparently trying to learn how to open the can as he had observed men doing it. Please do not accuse me of nature faking. This is an absolutely true story of what occurred and of what was seen above timber-line, even to the wood rat.

Some time later a whistling marmot visited my cabin. For a long time I tried to find out what brought him to that high elevation, where no grass or vegetation grew that formed his natural food. He was very shy and came only when I was absent or at night, usually about dusk or break of day. Finally, I caught him tasting some salt carelessly spilled on the floor, and then came to the conclusion that he came for the salt and that alone.

All mountaineers call this interesting rodent the "whistler" because of his piercingly shrill whistle, by which he warns his fellow-whistlers of danger. Incidentally, it is disconcerting and always annoying to be stalking some game animal and have one of these very alert marmots discover one and then let all whistlers know that it is best to watch out, and of course the animal you are after takes the hint and quietly hides until he, too, knows what it is that has scared the whistler.

Perhaps a good name for this marmot would be the "Whistling Haymaker," for in the art of cutting, drying, and storing hay he is in a class all by himself. He cuts grass and other plants that he likes into four or five inch lengths, then gathers them up into sheaves about an inch

in diameter and places the bundles in a spot, often on bare rock if handy, where they will soon dry thoroughly before they are stored in some safe, dry underground room. I hesitate to record it, for fear this will be added to the pack-rat story and my veracity forever doubted; but one late October afternoon, in company of the District Ranger, some twenty of these little sheaves of grass and weeds were found well off the ground on the limbs of a small alpine fir, where the circulation of air would be the very best for the final curing of the coming winter's supply of food. The little haymaker could have placed the bundles on bare rock or on nearly bare ground, but, with no sun shining and a good breeze blowing, he knew that his hay would dry much better in that small tree than it would anywhere else. Maybe animals do not

think, but they do something else, then, that serves their purposes as well as our thinking and reasoning do ours. The whistling marmot has been disappearing very rapidly the past dozen years. Where formerly there were colonies of hundreds there are now but few or none at all. No one being particularly interested, the reason is not known for certain, though it is possible that epidemics

carry them off in great numbers when the colonies become too thickly populated. It is only a few years ago when it was thought that there were no coyotes so far west, but they have increased at a great rate during the past ten or twelve years, and that they are frequent visitors to the alpine regions is proved by their tracks being often found in the snow. It may be only a coincidence, but the time and rapidity of the disappearance of the marmots agree with the appearance of the coyotes and their increase in numbers. The wily coyote undoubtedly has little trouble in catching the marmot, as it secures its food near or far from home. The whistling marmot is not favored much by stock or horse men, since it destroys forage and because its burrows make dangerous riding, but it would be too bad if it were to become extinct. The extinction of any wild thing is undesirable, unless it is the cause of destruction of other wild life, and the whistling marmot is an intensely interesting citizen of the high, wild, open places.

There were many other animals and birds to be seen, but those described are the little furred and feathered friends that most impressed themselves upon memory's tablet during my few months' stay in the high country.

EDITOR'S NOTE.—In the next issue Mr. Park will tell of his experiences in trying to make friends with a band of wild mountain goats, which his field glasses revealed one morning foraging breakfast on neighboring mountain cliffs.



"A PTARMIGAN WAS A MOST DIFFICULT OBJECT TO LOCATE"





## A Timberline Tragedy

By Clyde Robertson

*Planted by the winds of fate  
On the topmost peak of a jagged mountain,  
A lonely pine tree stands.  
Its misshapen branches are weather-bared and bowed.  
Desolate and unprotected, it crouches through the weary  
years.  
Its twisted limbs seem to writhe in pain;  
The skeleton fingers to reach downward in clutching frenzy,  
As if striving to anchor its storm-tossed branches  
In the bosom of Mother Earth.  
Threatened by sweeping gales,  
The swelling veins of the gnarled roots  
Tell their grim tale of suffering.  
The scorching rays of countless seasons of summer suns  
Have dried up the wellspring of its heart  
And withered its verdure.  
The endless years of winter snows  
Have congealed the life-giving  
flow in its bosom.*

*Dead, yet living—living, yet dead—  
The tortured plaything of cruel heat and relentless cold,  
It stands—a sentinel of Solitude.  
Above the fearful clash of warring elements,  
Over the waste of emptiness,  
Echo its screams of anguish and moans of pain—  
The tree that God forgot.  
Far down in the valley below,  
Sheltered through changing seasons,  
Caressed by soft winds and kissed by sunshine,  
The lofty pines lift their proud heads to heaven—  
The favored children of Nature.  
“You who in the love of Nature hold communion  
With her visible forms”  
Read in the distorted figure  
Clinging to the silent peak  
All the tragedies of the world,  
And in life’s mirror see reflected  
The sorrows of “the lonely pine.”*



## EDITORIAL

### The Immediate Issue in Forest Progress

WE were asked a short time ago what remains to be done in advancing forestry now that the Clarke-McNary Bill has been passed. The question, of course, was asked by one who thinks in terms of paper progress rather than in terms of actual forest growth. As pointed out elsewhere, we now have Federal laws sufficient to permit a vast amount of forest progress, provided we can put those laws to work and give full effect to their various provisions. Here is the crux of the present situation in Federal forestry.

Adequate appropriations under two laws in particular, the Weeks Act and the Clarke-McNary Act, are vital to real forest progress in America. Better forest fire protection and an enlarged program of forest land acquisition by the Government—the two most important features of a national forest policy—hinge upon the establishment of a definite fiscal policy with respect to Federal forest expenditures. Here is a big issue to which all advocates of forest progress must give immediate attention and active support. Without a fiscal forest policy, a national forest policy will be a will-o'-the-wisp. This is no time for resting on oars or for letting down of efforts, for the real critical drive for progress is ahead.

There is, we think, over-confidence that substantial appropriations will be made under the Clarke-McNary Act. Those close to the seat of government, however, know the political gauntlets which every new appropriation will have to run this fall. Recommended estimates of expenditures under the act, originating with the Forest Service of the Department of Agriculture, must be approved by

the Bureau of Budget, and the Bureau's recommendation will then be sent to Congress. It is the duty of the Forest Service to submit estimates for as much of the authorized appropriations as can be wisely used, but the Forest Service, like all other bureaus of the government, is under pressure from above and may thus be prevented from asking for as much money as it could spend effectively under the act. It will be unfortunate if the first appropriations made under the Clarke-McNary Act are puny in character. They will create a precedent hard to overcome in future years. What more striking example is to be found than the history of the Weeks Law under which the Government was pledged to a definite program of forest land purchases. That program—less than half completed after thirteen years—seems to have fallen pretty much by the roadside because of the difficulties, political and otherwise, of getting appropriations to carry forward the work.

The most immediately important thing, therefore, is for the forest-interested people to let Congress know that the American public wants forest laws backed by a strong fiscal policy of forest expenditure. This Association proposes to make this its main activity. Right now is the time for the man in the street, the commuter, the farmer, the professional man, the laborer, the merchant, the manufacturer, the housewife, in fact, every voter, to check up his congressman's attitude on appropriations under the Weeks Law and the Clarke-McNary Law. When the American public demanded these forest laws, it was looking for results. Let us not permit Congress to forget that fact.

### South Carolina Needs a Forestry Department

FRIENDS of forestry throughout the nation will watch with keen interest the results of the important meeting of the representatives of numerous interests called together in the name of the Conservation Society of South Carolina, late in August, at Columbia. South Carolina is one of a group of several of our heavily timbered southern states which have so far taken no active stand on their own forestry problems. As early as 1911 efforts were made, through the Conservation Committee of the Southern Commercial Congress and with the encouragement of the United States Forest Service, to pass

a forestry law in South Carolina. Nothing was accomplished further than arousing the interest of the people of the state, and during the World War economic conditions were so upset that work on a state forestry law was abandoned temporarily. Bills have been introduced in the state legislature during the past two sessions and have failed, due apparently to the fact that the public is not fully informed and that the support of the lumbermen of the state had not been successfully enlisted. It is encouraging, therefore, to know that the August meeting was attended by prominent lumbermen, representatives of

the railroad interests, of Clemson College, of the United States Forest Service, the American Forestry Association, and the Conservation Society. Complete agreement was reached with respect to the urgency of creating a state forestry department and providing for its support, as well as the importance of controlling forest fires in the state.

It is refreshing to see representatives of the lumber industry come forward and suggest a severance tax on all forest products for the support of a state forestry department, and recommend that the details be worked out in conference with the existing state tax commission.

At present lumbering is an important industry in the state, but one has only to note the housing conditions throughout the state to be convinced that local lumber

consumption is not as great as it should be. This is due, no doubt, to the remarkable increase in the price of lumber in the last fifteen years. South Carolina is destined to be a great consumer of lumber. As the country prospers, vast quantities will be needed for the improvement of housing conditions, and the field of wood-using industries, where now the surface has hardly been scratched, will absorb millions of feet of home-grown lumber.

The time is ripe for vigorous and concerted action by all interests, and it is to be hoped that the harmony evident at the Columbia meeting will crystallize into legislation backed by the entire citizenship of the state.

## Making Progress Complete

THE passage of the Clarke-McNary Bill by a Congress crowded and harassed by a great volume of pressing legislation and sensational investigations has been heralded as a great forest victory. And so it is. As an achievement in Federal forest legislation it ranks with the Weeks Law of 1911, which provided for the acquisition of land in the White and Appalachian Mountains for national forests. The new act not only broadens the Weeks Law but it provides authority for enlarged activity in fire protection, forest taxation, and other important fields of forestry. These two laws, in short, provide sufficient authority for the Federal Government and the states to go far in solving some of our more important forest problems.

But laws themselves are not the final test of progress; nor is the scope of authority provided by the laws. The test which marks real progress is the actual work of forest reconstruction which the laws put in motion. With the passage of the Clarke-McNary Act there has unfor-

tunately been the temptation to let down in effort because of a feeling that victory for a substantial national forest policy has been won, and because of a widespread misunderstanding with respect to the character of the act. The new law merely authorizes the Federal Government to do certain things. It appropriates no money with which to do them. Until Congress makes appropriations as authorized by the measure, the act will be a dead letter in most respects.

Many a victory has been lost by failure to follow up hard-won advances at critical moments. The present is, we think, the critical moment in the launching of the Clarke-McNary Act. There is danger that what has appeared to be great progress may in the end yield small results merely because the new forestry act may be weakened by lean and inadequate appropriations. It is a critical period in Federal forest appropriations—a period when the supreme attack of forest supporters must be made if victory is to be complete.

## The Case of McNary

ON A spring day last April a train of twenty-one cars pulled out of the station at McNary, Louisiana, and with it went the last of the population of the town. A few months before McNary had been a thriving community of three thousand persons, its industries revolving about the surrounding forests. The story of the end of these forests and of the end of McNary, Louisiana, is told on another page of this issue by Prof. H. H. Chapman, of the Yale Forest School, who uses the case to point out certain economic weaknesses in the lumber industry. The case of McNary is by no means an isolated one. Our lumbering history for years back is full of just such economic tragedies. They occur like an epidemic when the virgin forests of a given region begin to play out as they played out in New England, Pennsylvania, and the Lake States.

In the present decade, this epidemic is being visited upon the South, where, because of local forest denudation, hundreds of towns have passed on, leaving a trail of wreckage extending far into outlying districts. The far-reaching effect upon local communities and states of the

transitory character of the lumber industry as conducted in the past may be gained from a recent report of the Louisiana Tax Commission. Forty-one parishes in the state, it says, showed a decrease in valuation last year. In two parishes the decrease was over one and one-half million dollars, while several other parishes showed decreases of more than one million dollars. These decreases, we are told, are attributed to the cutting away of the virgin forests, which have in the past been the main source of the prosperity of the parishes.

From the case of McNary, which is cited only as an outstanding example of what is going on in the pine regions of the South, Professor Chapman concludes that the turning over of our waste forest regions to private exploitation has been a great economic blunder. Out of it necessarily came a system of lumbering which destroyed the old forests and made no provision for new forests or for the permanency of the forest industries. All this would have been changed, according to Professor Chapman, had the bulk of our forest areas originally been

placed under Federal management, as the timber on our National Forests is now administered.

What is past is past. The question of immediate importance is: Have conditions changed sufficiently so that lumbermen need no longer consider themselves slaves to an old and vicious economic system? We believe that they have, and there seems to be ample evidence to substantiate the belief. In the South there are outstanding examples, such as Henry Hardtner, the Great Southern Lumber Company, and the Crossett Lumber Company, of large private enterprises, which have recently changed from the old to a new system and are conducting their lumbering operations with an eye to the continuous production of timber on their forest land. Similar examples can be cited in other forest regions, showing that the old economic order is passing generally.

It is neither necessary, desirable, nor possible, at this late date, to attempt to acquire the major portion of these cut-over lands by public purchase, although a certain large percentage, possibly as much as one-fourth of the balance, should eventually, in our opinion, be so acquired by either the National Government or the states in order to practice conservative forest management as a national protection against the future and as a demonstration of what can be accomplished by improved forestry measures. For many good reasons the larger portion of these lands will remain in private hands and must continue to grow timber in order to produce any revenues. If the lumbermen who still own these lands will in good faith keep step in approved forest practice with the economic opportunities of the day, there is yet time to convert a large portion of the still-uncut forests into permanently productive investments.

## Preserving Our Forest Lore

ARE the new generations of America losing the joys and inspirations to be derived from the world's rich store of forest lore? We are prompted to ask this question by a communication from Mr. William H. Newell, of Pennsylvania, who makes a plea for the preservation of the forest in story and legend. For years without end, hearts, both old and young, have been thrilled by the folklore of the forest, passed down from generation to generation and enlarged upon by the centuries. With civilization becoming more and more removed from the forest and more and more steeped in commercialism and the fumes of the motor, are we forgetting our forest lore? We hope not.

As Mr. Newell points out, the forest is the home of romance, and the world loves romance. From the earliest times the woodlands have been famous in legend and story, and folklore has peopled them with all kinds of imaginary beings. On the forest-covered mountains of the North dwelt the Trolls, grim monsters living in dark caves and given to magic. In the bosky dales sported the fairies.

"They come from the beds of lichen green;  
They creep from the mullen's velvet screen—  
Some on the backs of beetles fly  
From the silver tops of moon-touched trees."

The waterfalls and streams were the homes of the water sprites. In that beautiful tale "Undine" a young knight discovered a lovely nymph on the bank of a brook waiting for his love and for immortality.

The forest was the scene of knightly exploits and adventure. The errant warriors performed great deeds of arms against strange adversaries.

"When every morning brought a noble chance  
And every chance brought out a noble knight."

And in their wanderings they beheld all sorts of wood sprites and hobgoblins, as the knight who, journeying along forest paths.

"Himself beheld three spirits mad with joy  
Come dashing down a tall wayside flower."

Thomas the Rhymer beheld the queen of the fairies riding under the Eldon tree. Merlin met his fate in a forest in Brittany. The enchanter became enchanted. And in that mystic legend, "Quest of the Holy Grail," Sir Launcelot discovers a chapel in a lonely forest. On entering he beholds the sacred vessel surrounded by angelic beings.

Sherwood is famous as the abode of Robin Hood and his Merry Men. And the memory of that prince of outlaws lingers around the old oaks and the forest glades. One of the best scenes in fiction is the meeting of Richard the Lion-Hearted and Friar Tuck. The king, having lost his way in Sherwood, asks shelter for the night. And the jovial clerk of Capmanhurst places his best cheer before his guest, a great venison repast, with plenty of liquid. A harp is produced. Then the king and the hermit settle down to make a night of it. And the forest soon resounds with a stentorian chorus—

"Come troul the brown bowl to me,  
Bully boy! Bully boy!"

When Europeans first came to this country, they beheld the land covered with vast forests. To those emigrants the woodlands were full of mystery and they peopled them with supernatural beings. When the Dutch settlers heard the thunder rolling around the peaks of the Ontiora Mountains, they imagined that Henry Hudson and his goblin crew were playing at ninepins. And rising mists from the Blue Mountains were supposed to be steam from the soup of the demon wolves who inhabited the wilds.

The folklore of our forests is wild and romantic.

While we are protecting and restoring our forests, we should by all means also preserve the legends that add so much to their charm and beauty.



## A Sequoia Tree Far From Its Home

By W. C. MUENSCHER

WHILE on a collecting trip along the eastern side of Cayuga Lake, in central New York, my attention was called to an unusual-looking tree standing in an open field. A closer examination proved it to be a California Big Tree (*Sequoia gigantea*). Since this species is generally considered not hardy north of Philadelphia, a brief note on the occurrence of the tree in this locality might be of interest.

The tree stands in an open field of "Dunkirk stony clay" soil near the edge of the village of Aurora. The exact location is about 200 yards from the edge of Cayuga Lake

that were picked up under the tree contained fertile seeds. The cones on the tree were inaccessible, so they could not be examined for seeds.

According to statements by the present owner of the land upon which this tree grows, it was brought from California by an old sea captain between 1820 and 1830. In 1850 this property was purchased by the father of the present owner, who was much interested in trees and took special care of the sequoia. The soil about this tree was not plowed, but it was frequently fertilized with manure. The tree has always been hardy and never suffered from the cold winters until the severe winter of 1917-1918, when most of the lower branches were killed. It was after this injury that the lower branches were removed. Before this time the lower branches reached almost to the ground. The accompanying illustration shows the tree as it appeared in May, 1923.

It appears that the sequoia cannot be grown successfully in the northeastern United States. It has not proved hardy in New York City nor around Boston. Even the trees that thrived for a number of years in Rochester were killed in the severe winter of 1917. It may be possible that there exists in the particular locality in which the Aurora tree is growing, a combination of soil and climatic conditions more favorable than in other localities where the sequoia has been tried.



THE VISITOR FROM THE FAR WEST

A California Big Tree, planted in Aurora, New York, about one hundred years ago. Injured only once by the big freeze of 1918, when it lost most of its lower branches, it has apparently made itself perfectly at home in its strange environment.

on a gentle slope that is exposed to the cold winds from the lake. The nearest tree is a huge native white oak (*Quercus alba*) which stands about 100 feet east of the sequoia.

This sequoia tree is at least sixty feet high and the base of its tapering trunk is four feet in diameter. The lower branches, for a distance of over thirty feet up the trunk, have all been cut off. The upper branches are in a good condition and are covered with dark green leaves. With the aid of field glasses numerous well-developed cones were observed in the top of the tree. None of the cones

## Evergreens Planted for Memorials

By JANET GARGAN

MANY California clubs are planting Christmas trees during the midsummer season in honor of Mrs. Thomas G. Winter, past president of the General Federation of Women's Clubs. When the General Federation met in Los Angeles this year the plan was advocated to use living Christmas trees in place of those cut from the forests and mountain slopes. Mrs. W. I. Higgins, of Butte, Montana, who originated the Garden Week idea in Montana fully a year before the General Federation indorsed it, presented the plan at the request of Mrs. John D. Sherman, president of the Federation. Each club is to plant a Christmas tree as a living memorial, and California is in the vanguard in starting the planting.

The resolution as passed reads:

"Whereas the mountain slopes of many of our states are being denuded by the cutting of millions of Christmas trees each year; and whereas by the planting of trees we learn the lesson of their culture, economy, love of trees, and appreciation of their beauty in the home garden as well as in our city parks and school grounds; be it therefore

"Resolved, That the General Federation of Women's Clubs indorse the movement in America to plant community and home Christmas trees and thereby help to conserve the forests."

# PINE-BURR STORIES

By ELOISE GERRY

## I. A Five-Year-Old Forester

**J**OHN Beverley Randolph, looking much too tiny for his big name, lay snuggled, rosy, and warm in his little white bed. The early morning sunlight was just peeping in through the scarlet geraniums in the window box. It joined forces with light from the fire in making the room bright and cheery. John Beverley, or "J. B.," as they usually called him, looked proudly at the leaping orange firelight. He himself had toted in that big pitchy knot that lay on the top of the fire and blazed so brightly. It had been a present for Mother. He had found it out in the woods yesterday, and old Uncle Jim had told him it was lightwood like they used to make torches of when they went hunting. He sniffed the pleasant smell of the burning pitch as he lay there.

He was very comfortable. He wasn't a bit sleepy now, for he had been in bed ever since supper time the night before. How sleepy he had been last night, though, after the long day with Father in the woods. He had had to pinch himself to keep awake till the frosted cake and preserves were passed at supper. He could scarcely remember when Mother had undressed and bathed him before she had tucked him up for the night. She had kissed him good-night, though, he knew that. No day could end without Mother loving him to sleep, even if he were getting to be a big boy.

He could hear her talking now. They must be at breakfast. He could hear Father's deep voice and the voice of the strange man in the green suit with trees on all his buttons. The man had a camera and a wooden thing that looked like a big chicken with a long beak that would open and hold a whole tree in its mouth. They call it a "caliper" and the stranger had let J. B. carry it sometimes. The visitor had had a funny thing in his pocket, too. He would bore it into a tree and bring out a little piece of wood as big around as a pencil. He said it showed him how old the tree was. Some of the trees were only five years old, just like J. B., but others were 200 years old, older than Father, or even than Grandfather Willowby, who had a long white beard. J. B. liked to go in the woods

***H**IDDEN beneath the hard brown scales of a pine "burr" or cone lie the seeds. Each may unfold its little winged bundle of mystery into a tree. Like these hidden seeds, the lives of the boys and girls who live deep in the southern "piney woods" also unfold with a varied and picturesque interest.*

with Father and this Forestry Man.

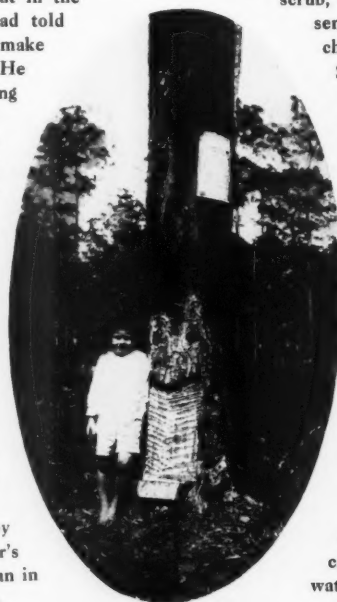
Yesterday they had seen a deer, and a wild turkey, and a big snake. Once they had nearly stepped on a lot of brown birds that whizzed when

they flew up. Later he had heard some one call "Bob White," and Father had said it was just one of those birds. All of a sudden now J. B. felt very hungry—it was the smell of the breakfast bacon that did it. He could hardly wait for his oatmeal and his mug of milk, so he jumped out of bed and, after a hasty, but thoroughly drenching, scrub, climbed into his little blue suit and presented himself shyly beside his Mother's chair.

She straightened his buttons and fed him while the men talked about what they would do that day.

John Beverley began to listen. They were going out into the turpentine woods. "Oh! Father, let me go, too," he cried. "He's a regular 'tar heel,'" said Father, smilingly, to the Forestry Man. J. B. looked inquiringly at his little bare heels. Father was just joking again. He only meant that every turpentine man sometimes got pitchy around the still where the sticky barrels of pine gum were. J. B.'s heels were really very clean, for it was still early in the day.

"Well, let's go," said Father, and J. B. trotted along behind the two men and climbed into the back seat of the Ford, where he curled up along with the ax, the calipers, the camera, the rain coats, and the water jug. The Forestry Man wanted to see some trees that Father had been turpentine. The sun was already hot, and for the first few miles they went through the Bill Jones land, where all the trees were dead and there had been a fire. J. B. could remember that fire. It had been all Mother could do to make him believe that the men would be able to stop it before it burned their house and his new wagon and his rocking horse. How it had frightened him to hear the flames roar in the wind as they blazed in the tops of the big trees, and how the fire had snapped when the little young trees and palmetto leaves burned. Now the land lay all hot and dry and sandy in the sun, and there weren't any



"'COURSE I LIKE TO GO OUT IN THE WOODS," SAYS JOHN BEVERLEY

flowers to make a bouquet for Mother. Everything but the little old oak trees was dead and everywhere you stepped the charred and burned stubs made black streaks on your clothes. He was glad that they did not stop long, only long enough for the Forestry Man to take a picture. "Well, that shows how *not* to turpentine and treat the woods," said Father. The car twisted and bumped along and slid down



BILL JONES' LAND, WHERE THE TREES ARE MOSTLY DEAD

into a creek. How white the sand was with the cool, clear water running over it. The shade of the living trees along the bank was so pleasant and cool and green. Now they were in Father's woods, and they stopped to look at the cups on the turpentine pine trees. J. B. knew how to straighten them, if they were crooked, so that the gum would not run out and waste on the ground. He loved to stir the thick, whitish gum in the cups and see it drip slowly off his stick. The sunlight on the fresh drops of gum hanging from the cut wood next the bark made them shine like a rainbow. Each single drop looked like Mother's ring shining in the light.

Father and the Forestry Man were measuring the "faces" on the trees and talking and talking. Father was telling about how many more barrels of turpentine he got by making *little* cuts on his trees than Bill Jones got by making *big* ones.

John Beverley found a nice shady spot and began to look for little pine trees. Father had shown him how to tell the difference between the seedlings and the grass blades. Here was a big pine burr and there close beside it were six little pine trees just started. There, on the other side, was a pine seed just planting itself. The brown wing was standing up straight in the air; the seed was already partly buried in the ground. Here were some bushy young trees already several years old. Father had worked so hard to keep the fire out of these woods, here between the creek and the road. Now he had a nice lot of young trees.

Many of them were the same age as J. B. Father told him they would soon grow tall and faster than he did and so every time they came here they measured J. B. and the trees to see which was growing faster.

They went to Mr. York's turpentine camp for dinner. After dinner Georgie York and J. B. went off to play by the creek. Georgie knew where there was a bird's nest with eggs in it. They picked some flowers and dipped the pinkest ones in hot rosin at the still. How beautiful the color looked through the coat of rosin. Then J. B. showed Georgie how to find little pines in the grass. Georgie's new puppy tried very hard to help. He seemed to think they were hunting a bone for him. J. B. showed Georgie the purple-brown buds on the young slash pines and the shining white buds, like candles, on the small long-leaf pines. After that they made some little baskets out of the "pine straw" or long-leaf pine needles in a way Georgie's mother had taught him.

Before they had finished, Father was ready to go and they cut across the woods, dodging in and out among the trees and stumps.

The sunset light was making the woods a fairy place before the Ford finally chugged up the last sandy ridge behind J. B.'s house. A tired but happy boy tightly holding his resin-glass flowers ran into the house shouting for Mother.



BUT FATHER'S WOODS WERE NICE AND SHADY—JUST THE PLACE TO PLAY

"Did you have a good day?" she asked, as she put the flowers in the place of honor in a vase on the mantel above the fireplace. "Oh! mother, I love to go in the woods," said John Beverley.



## Strangers in the Cover

[Continued from page 588]

hawks, and owls, and if one did survive it would mercifully freeze to death the first cold night in November, before it had a chance to starve. That shows you how much we knew about pheasants.

The next fall we farmers began to see a few strange and very beautiful birds in our corn fields. Every one of us went right straight to the owner and explained that he could go down there on Pinkie's Island with a handful of corn and catch his pets—they were as tame as tame. He never tried it but once. Personally, I'd rather contract to catch a wild antelope on the treeless plains than a full-grown pheasant in good cover. At least you can see the antelope from time to time.

Though thousands of miles from home, these strangers found our valley particularly adapted to their mode of life and in many ways not unlike the river valleys of far-away China. From rocks to rocks the level valley floor is nearly two miles wide, extending north and south for more than thirty miles, sheltered on both sides by high ranges of the northern Catskills. Here are wide meadows and grain fields. Along the river are hundreds of acres of dense "jungle," laced with wild grapevines, matted with willows, and thick with head-high weeds. There are bushy islands and reedy swamps, swales and thickets, dense patches of sweet clover and golden rod, and all the rank weeds that pester us poor farmers.

Nor is there the slightest danger that this new game bird will interfere with the few surviving flocks of our native grouse. The pheasant avoids the woods. It does not even like the upland brush lots and bushy pastures so much favored by the grouse. The pheasant is by instinct a bird of the open. It likes weeds and brambles—the thicker the thicket the better. It will slip through this cover like a snake, faster than a dog can run. It rises to wing only when all other methods of safety fail. Then it leaps high in the air, with a great roar of its broad, short wings and a mighty warning cry of "*Ca-ca-ca-ca-ca!*" The cock birds in flight look as big as turkeys. The long tail, fully spread, makes it look twice as large as when walking. It flies fast when it gets under way, mounting high and putting on speed until it is above the treetops; then it goes gliding and sailing for the latter half of its journey. A well-frightened bird will easily fly a mile and run another before it feels safe. The noisy cry of a flushed cock is even more startling than the thunder of its wings. When one has become accustomed to the plaintive "*Pete! Pete!*" of a timid young grouse and the faint "whistle" of a towering woodcock's wings, the loud warning scream of a cock pheasant is surprising, to say the least.

The pheasant, as a transplanted game bird, has a most interesting history. The European bird, it is reported, came originally from the vicinity of the River Phasis, on the Black Sea; hence its name. The Greeks and Romans brought it to Europe for its beauty and its delicate flesh. It was served on the tables of the Cæsars. In the fourteenth century the kings and nobles of France naturalized the bird, where it became royal game of the first class.

This means that if a poor farmer killed one and was caught at it, he didn't eat meat again for a long time!

It is thought that the pheasant, like the fallow deer, was taken into England by the conquering Romans. Certainly it is a very old resident there and the records are not clear as to when it came. It appears on bills of fare as far back as 1059 A. D. It has been there ever since, gradually moving up into Scotland and over into Ireland. This same bird was later taken into lower Norway and Sweden and is found over the greater portion of Europe. The original English pheasant was somewhat different from the Chinese pheasant familiar here. The species seemed to have been quite distinct until the Chinese and Japanese or green pheasants were introduced there and quickly crossed with the older resident.

Several attempts were made to bring the English pheasant over here as long ago as 1800, but they all ended in failure. One of the first shipments was made by Richard Bache, of New Jersey, but they all died the first winter. The English type did not seem to be hardy enough for America.

It was in 1880 that our consul at Shanghai, Hon. O. N. Denny, began sending the beautiful Chinese pheasant, at his own expense, to Oregon, where he believed it could be naturalized. A final shipment, sent in 1881, proved successful. The birds did well in their new home; so well, in fact, that ten years later, when the pheasant season opened, 50,000 cock birds were bagged. These pheasants soon spread all over the northwestern corner of the country, until now they are probably more plentiful there than in China.

The wonderful success of the Chinese pheasant on the Pacific Coast led other states to try the experiment. In this, New York State has been most successful. Twelve years ago a state game farm was established at Sherburne, Chenango County, for pheasant culture on a scientific basis, to supply eggs and young birds and to maintain and improve the breeding stock. The first year 800 birds and 5,000 eggs were distributed. In 1922, 11,115 live birds and 109,146 eggs were sent out from the three state game farms at Sherburne, Brownsville and Middle Island. It has been no easy task to develop these game farms to their present high standard, and the difficulties encountered and surmounted make another interesting story.

By sending young birds and eggs to game clubs and responsible people, the Conservation Commission has succeeded in establishing this game bird throughout the entire southern portion of the state. It is especially abundant in central New York, the Mohawk and Hudson valleys, and is already more plentiful in some localities than the ruffed grouse or woodcock.

(The concluding part of Mr. Shafer's interesting story of the ring-necked pheasant will appear in the next issue of *AMERICAN FORESTS AND FOREST LIFE*. In it he will tell of the remarkable cleverness of these game birds in skulking and hiding and in eluding the hunter and his gun.)



# The American Papaw

By C. F. LANGWORTHY

THE name papaw (sometimes written pawpaw) is applied to two distinctly different fruits, both grown in the United States—one the native American papaw (*Asimina triloba*) and the other the fruit of the tropical American tree papaya (*Carica papaya*).

The papaw (*A. triloba*) varies in size from a bush to a medium-sized tree and usually bears fruit abundantly. From early times in this country the fruit has been gathered and used as food, the European settlers apparently learning its use from the Indians. Wherever it grows its use as food is well known, especially in rural regions, and is a favorite with many. It is little known, however, outside of the regions in which it is found wild, very likely because the flesh is very soft and easily bruised, especially when fully ripe. The fruit, which matures about the middle of September, remains in good condition only a short time after it is picked and does not stand either transportation or storage well. This difficulty is increased by the fact that many do not consider it edible until it is dead ripe;

some even prefer it after it has begun to turn blackish in color and others maintain that a frost is required to bring the papaw to perfection. As a result of these preferences it is ordinarily eaten from the tree and is not

found in quantity in the markets, even in the regions in which it grows.

Writers appear to differ as to whether the skin of the papaw should be eaten in conjunction with the pulp or not, some maintaining that the skin possesses constituents which cause urticaria, while others pronounce it both palatable and wholesome. According to Corbett, it is more usual to eat the skin with the pulp than to discard it.

The nature of the fruit of the papaw has much in common with the custard apple, being a member of the same family. In appearance the mature fruit is prac-

tically cylindrical, with both ends rounded, the length being two or three times its diameter. The stem is attached, not at the end on the line of the long axis of the fruit, but a little to one side of the end, so the fruit hangs almost horizontal rather than perpendicular. The size



A FRUITING BRANCH OF THE PAPAW TREE

The stem of the papaw is attached, not at the end on the line of the long axis of the fruit, but a little to one side so that the fruit hangs almost horizontal rather than perpendicular. The size of the fruit varies considerably, the best specimens coming from the Mississippi Valley.

of the fruit varies with the localities in which it grows, the best coming from the damp lowlands of the Mississippi Valley. A good-sized papaw will weigh a pound, though most of them are smaller, particularly when they grow clustered on the branches. The fruit contains a double row of shiny black seeds, which are arranged at right angles to its axis and occupy a very considerable portion of the interior of the fruit. Surrounding the seeds is a creamy pulp having a smooth texture and a rather pungent aroma, which, as the fruit ripens, is replaced by an ethereal flavor, for which the papaw is especially esteemed by its admirers. In appearance the papaw resembles the banana more than any other common fruit, though the pulp has a different texture and the fruit is smaller than the varieties of bananas commonly seen in this country. The papaw is very generally eaten

made of pears or peaches may be made of papaws. The custard (pulp) may be spread on a board and dried like pumpkin leather. Papaws may be kept in their natural state till midwinter or longer by laying them down in oats."

Lloyd gave considerable attention to the papaw and in his study found that all parts of the tree and green fruits contain a volatile oil that imparts a pungent odor. He also states the bitterness of the bark and of the seeds is due to a bitter extractive, the characteristic constituent of which is an alkaloid to which he gave the name "asiminine." He prepared and studied the physiological action of asiminine hydrochlorate, finding that a state of excitement and a state of torpor follow the subcutaneous administration of this drug.

Inasmuch as little information is found regarding the



#### THE PAPAW READY FOR EATING

In addition to being an exceptionally palatable fruit, the American papaw ranks well with other fruits in food value. Researches by Dr. Langworthy, of the States Relation Service, show that it deserves to be classed not as a tidbit for occasional consumption, but as a fruit of real worth.

in the localities in which it grows, but out of hand rather than as a recognized part of the diet, differing in this respect from such wild fruits as berries. Although some may not care for its peculiar flavor, its wholesomeness has been proved by long experience, children being especially fond of it and often eating it in quantity without harmful results.

Little states that "the settlers in southern Kansas partly subsisted on pecan nuts and papaws" when their crops had failed, and in regard to the use of papaws he says: "It makes a splendid custard pie. There is no finer dessert than papaw eaten with cream and sugar. It is used to make beer the same as the persimmon by putting the fruit in a jar, mashing it, and putting water on and letting it stand until fermented. It also answers to make pudding just the same as persimmon pudding is made. It is also said that brandy equal to peach brandy is made of papaws. Marmalade which is equal to that

dietetic value of the papaw, it seemed desirable to determine the composition and nutritive value of this fruit, to test its table and culinary qualities, and to see whether it offered possibilities for more varied and extensive use as food. Papaws grown in the immediate locality of Washington, D. C., were procured for this purpose, and others were obtained from the American Genetic Association, which is interested in a study of the possibilities of the papaw as a cultivated fruit for general use.

Ten specimens of varying size and degree of ripeness regarded as fair representatives of the fruit were selected for study. The color of the pulp of the fruits studied varied apparently with the degree of ripeness, ranging from a deep creamy white in the fruit, which was slightly unripe, to a very deep brownish cream in the fully ripened fruit. The pulp directly beneath any bruised portions of the skin quickly became very brown and, in one or two fruits which were rejected, almost black. The pulp ob-

tained from the fruits studied was thoroughly mixed, sampled, and analyzed.

The papaw pulp is relatively low in water content and consequently relatively high in total solids, resembling the banana in this respect rather than the other fruits with which it is often compared. The protein content is noticeably high, while the content of fat, carbohydrates, and ash is within the range for other fruits. The fuel value of the papaw as calculated from the protein, fat, and carbohydrate content by means of the factors commonly employed for that purpose is 435 calories per pound, which is relatively high, the value of the fruits ranging from 135 calories per pound for watermelon to 685 calories per pound for avocado.

A review of the literature gave no information as to the thoroughness of digestion of the papaw, nor were sufficient quantities of the fruit available for studying its digestibility in this laboratory. However, when eaten freely by several of the laboratory staff, it was not found to cause digestive disturbance, nor was there any indication that it failed to digest as thoroughly as do other fruits. Accordingly, it seems fair to assume that the fruit would be as completely assimilated as others in common use, and studies of the digestibility of many types indicate that the fruits are, in general, quite thoroughly digested. It would seem, then, that the papaw is relatively rich in nutritive material as compared with other fruits.

As the principal food material in the papaw is carbohydrate, it seemed desirable to determine its character. When samples of the papaw pulp were dried at 100° C. the material became somewhat darkened and developed a pleasant caramel-like odor. The relatively

high carbohydrate content, 17 per cent, suggested a high sugar content. An analysis of the dried papaw pulp, made by the Bureau of Chemistry, showed that the carbohydrate of the papaw contained about 16 per cent sucrose (cane sugar) and 35 per cent reducing sugars, or 52

per cent reducing sugars after inversion. For comparison it may be stated that, while bananas contain a slightly higher percentage of carbohydrate than the papaw, the well-ripened fruit contains approximately the same proportion of sucrose and reducing sugars as was found in the papaw.

Papaw fruit was cooked in several ways in this laboratory in order to learn the effect of the different methods on flavor, texture, and palatability. Some of those who tasted the cooked dishes thought that when used like pumpkin for pie-making the papaw was fairly palatable, but otherwise cooking did not give satisfactory results. This seemed due to the fact that cooking developed a very pronounced and not agreeable flavor differing from that of the fresh fruit. A more satisfactory way of using the fruit was to beat the pulp to a creamy consistency, mix it with an equal amount of cream, and freeze as ice cream. Thus frozen the characteristic flavor was less pronounced than in the fresh fruit, and even those not accustomed to eating the papaw liked the flavor of the papaw ice cream. Therefore, it is indicated that heating does not improve, but rather injures, the papaw flavor, whereas chilling makes it less pronounced and more agreeable to unaccustomed palates.

Considering the composition of the fruit, its distinctive flavor, and pleasing texture, it seems to deserve the good opinion in which it is held in the regions where it is abundant.—[Courtesy of *The Journal of Home Economics*.]



A FLOWERING BRANCH OF THE PAPAW

The leaves and bark of the papaw contain a bitter alkaloid called "asim-nine," which also occurs in the green fruit. It is due to the presence of this extractive that occasional cases of illness or "poisoning" are reported. It appears that some persons are more predisposed than others to the poisonous effect of the green fruit. When ripe, the pulp is wholly healthful.

## The Public Attitude Toward Conservation

[Continued from page 580]

the world. In France three superpower systems are in process of development. One of them extends from the Pyrenees to the Italian boundary; another will interconnect the various water powers in the French Alps, while the third will bring power from the coal fields of Lens to Paris. England, it is announced, has been divided into sixteen power zones, which are to be linked up into one system. The capacity of the larger generating plants will be greatly increased, while many of the small stations will function only as distributing units. Water power, however, is relatively unimportant in Great Britain, and coal will feed the boilers at the power-houses for a long time to come.

Italy, whose lack of coal makes hydroelectric development peculiarly desirable, has already connected its principal stations in the Alps and the Apennines, allowing more complete and efficient use of generating equipment. In Spain, Japan, and Australia ambitious plans for similar development of superpower systems have been formulated, though thus far they exist only on paper. It may also be noted that in at least three European countries—France, Switzerland, and Italy—plans for the complete electrification of all railways have been carried beyond the paper stage and are in a fair way toward realization. Norway and Sweden have also made tremendous strides in harnessing the energy from mountain torrents. The undeveloped water-power resources of South America, Asia, and particularly of central Africa, are stupendous, but they are at present almost wholly unused.

The unfavorable attitude toward conservation that is occasionally manifested in this country should not be overlooked. A statement was recently published in the newspapers which quotes a high official of the New York Stock Exchange to the effect that "the best way to conserve our natural resources is to use them." This man deals in securities—stocks and bonds—yet he would never say that the best way to conserve our financial resources is to use them up. The financier always makes a distinction, and rightly so, between principal and interest, between capital stock and profits, between bonds and the interest coupons on the bonds. Does a banker or an investor spend the interest or dividends that he receives? Certainly he does. Does he spend or "use" the bonds or stocks themselves? Not if he can help it. They constitute his invested capital, his protection against poverty in old age, his assurance of an income for his wife and children. As individuals, we do not use up our invested capital, if we are fortunate enough to accumulate any. As a nation, we have not clearly distinguished between the bond coupons and the bonds themselves. We have acted with our natural resources like a prodigal spendthrift who inherited a huge fortune and spent his substance in riotous living, heedless of the morrow.

An unfortunate viewpoint toward conservation of natural resources is mentioned by a leading southern newspaper, which, in commenting on the fact that certain industries were opposed to the development of Muscle Shoals, says: "There was a threat that more than 6,000,000 tons of coal a year would lose a market because

of the development of 'white coal' at Muscle Shoals."

That is the attitude of supreme selfishness, which shouts, "Let me sell my coal at the highest price; let posterity look out for itself." Those who have obtained control of certain resources too often are after the cold cash; and their alertness in behalf of their own interests forms quite a contrast to the apathy which has in great measure characterized the rest of us. As the *Journal of Commerce* (New York) recently observed:

"Conservation has always been an unpopular policy with a large section of the people, a fact which accounts for its lack of progress. Added to this is the fact that many citizens frankly avow their desire to have immediate and rapid exploitation in the interest of prompt and extensive 'prosperity'."

But the time is not far distant when we will comprehend the fact that if 6,000,000 tons of coal should "lose a market," due to the substitution of hydroelectric power, the nation would be just that much richer; if 600,000,000 tons of coal should "lose a market," we would be even better off. There is, of course, no danger of the market being "lost" so suddenly that an economic crisis would ensue. Employment conditions in the coal fields have always been more or less chaotic, anyway, and the substitution of electrically generated power for coal would cause no more hardship than the gradual substitution of motor transportation for horse-drawn vehicles.

Hydroelectric power cannot altogether displace coal, because coal is used for many purposes other than power production. In the refining of metals, for example, coal is indispensable. The more coal that "loses a market," the more coal will be saved for those necessary purposes for which there is no substitute. The energy that goes to waste through the non-use of water power is almost incredible.

Our stock of coal stored in the ground underneath the United States is probably our greatest resource, with the one exception of our fertile soil. We have the best-filled coal-cellar in the whole world. It is the accumulation of the vegetable wealth of untold ages—compressed, condensed, purified, close-packed laid away on shelves, ready for use. The treasures of Tutankhamen's tomb are as nothing beside it. It is fabulously rich in a long list of the most valuable products known to man. Why should we burn it "raw" in our locomotives and in our homes when we can so easily obtain from it so many useful products—carbolic acid, naphtha, benzol, toluol, creosote, ammonium sulphate, dyes in all colors of the rainbow, and dozens of others—leaving the coke for ordinary heating purposes.

The advocates of conservation do not wish to stifle any industry or to throw a monkey-wrench into any line of business; but if this nation is to "carry on" and to be protected from short-sighted exploitation, it will be necessary for many million tons of coal to "lose a market"; also for certain classes of forest products to lose a considerable part of their market; if they do not, there will be neither the resources nor the market. Several of the lost markets during the past hundred years have proven

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# AN AMERICAN LANDMARK

THE following interesting letter and photograph were received by the Editor from Mrs. Annie Kilburn Kilmer, mother of Joyce Kilmer, the poet, whose beautiful lines, "Trees," are now familiarly known and quoted everywhere.

"It has been my pleasant fortune to visit for the fifth time Wethersfield, Connecticut, a quaint little hamlet lying just out of the fine city of Hartford, and as Wethersfield is the home of the largest elm in America, I'm wondering if a brief description of the famous tree may not be interesting to those of your readers who have not seen it, and to those who have it will renew pleasant memories.

"My first visit to Wethersfield was made two summers ago, because I wished to see the spot where my English ancestor, Thomas Kilburn, made his first home in this

country after landing, in 1638. The history of the Kilburn family, published over fifty years ago, states that he, with his wife and four children, settled in Wethersfield, but does not give the spot where he lived. It was quite natural that he should have selected Wethersfield, for its low-lying rolling meadows bear a strong resemblance to Wood Ditton, Newmarket, Cambridgeshire, which he left when the unjust taxation of Charles 2ND made him discontented with his English home, where he was church warden in the little Parish Church of St. Mary's, Wood Ditton, and, where his children were christened.

"He was not a young man—55 years old, the record reads—but he must have been a man of great resolution to make the venture, with a wife and family, and begin a new life in a new country. He was not a poor man, as he owned twenty score acres in Wood Ditton, and though, of course, a good conscience gives one great courage, I sometimes think a fat pocketbook helps still more. Still, it must have been a great change to be an unknown citizen in the great new country he had entered, past the prime of life and no longer enjoying the office of church warden, which in those days ranked a close second to the vicar and the squire. I was unable to find where in Wethersfield he settled, on my first visit, though I made a partial search in the clerk's office among the big dusty volumes stored there. It was only on my second visit later in the season, that I found it and also the big elm.

"It was at the historic old Webb house, where we had luncheon, that my companion found an old yellow map on the wall of one of the rooms on the ground floor. To our great delight, we discovered on the map the names and houses of Thomas Kilburn and the other first settlers of Wethersfield. My ancestor's house was situated in Brewster's Lane, which still bears the name; and though, of course, the present house on that spot is comparatively modern, still an active imagination could picture Thomas Kilburn selecting the location and supervising the building of what was to be his home for the rest of his life.

"And then I found the gigantic elm. A placard on the tree states that it was 250 years old in 1916. It also gives the dimensions, which, alas! I do not remember, but it says it is the largest elm in this country. I inclose a snapshot. My son, Sergeant Joyce Kilmer, wrote a poem on "Trees," and the elm was his favorite. I only wish he might have seen this one, as his poem might easily have been written about it. May I quote it?"

## "TREES"

BY JOYCE KILMER

"I think that I shall never see a poem as lovely as a tree!  
A tree whose hungry mouth is press'd against the Earth's sweet,  
flowing breast;  
A tree that looks at God all day and lifts her leafy arms to pray;  
A tree that may in summer wear a nest of robins in her hair;  
Upon whose bosom snow has lain, who intimately lives with rain.  
Poems are made by fools like me,  
But only God can make a tree."



JOYCE KILMER'S MOTHER AT THE FOOT OF  
AMERICA'S LARGEST ELM

Such a tree, she says, might well have inspired the beautiful  
lines which brought her son posthumous fame.

## Why the Town of McNary Moved

[Continued from page 592]

ciency by Civil Service rules and the traditions of the Forest Service, a forest type of almost identical character is retained in full productiveness for all time. The private operators are permitted to earn a reasonable profit—the proof of which is the enormous and growing revenue from timber sales on National Forests conducted under this system.

This parallel carries its own lesson. It is the strongest possible argument in favor of the principles of extending public ownership as embodied in the McNary bill, which by a curious coincidence bears the same name as that of the town which emigrated from denuded private land to find a new home on the public forests. It calls attention to the essential difference between National Forests and National Parks—both necessary—but the former serving the public in a broad and fundamental economic way, while the latter are confined in their service to the single paramount object of preservation of scenery for recreational and scientific values.

For the South, the McNary bill holds out the hope that at least a portion of these Longleaf pine lands may be acquired by purchase and in time restored to productivity—thus slowly and partially correcting what has proved to be a colossal economic blunder of our first century of national existence, namely, the unrestrained private acquisition of productive forest lands not essentially adapted to agriculture.

## First American Shade Tree Conference Meets at Stamford

**"M**ORE than one hundred millions of dollars is the annual loss in the United States of shade trees through insect pests and physiological maladies," said Dr. W. E. Britton, chairman of the Connecticut State Tree Protection Examining Board, in opening the first conference of government agricultural and forestry scientists and the leading shade-tree experts of the country, held at Stamford, Connecticut, on August 25th and 26th.

The purpose of the conference was to disseminate a better knowledge concerning the problems of shade-tree protection against insects, diseases physiological and entomological, and mechanical injuries. Virtually every State botany and forestry board, agricultural college, and tree surgeon in New England and the Middle Atlantic States was represented and took an active part.

The principal interest at the conference was a series of tours of inspection throughout southern Connecticut and adjacent New York State, to enable the visitors to observe and discuss the good and bad features of tree-protection work. The results of a field study made by the conference in New York and Connecticut were epitomized at a banquet given under the auspices of the entertainment committee, of which Mr. Frank A. Bartlett, of the F. A. Bartlett Tree Expert Company, was chairman.

## October Brings School Days

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## The Public Attitude Toward Conservation

[Continued from page 624]

to be our greatest blessings; such as the disappearance of the slave market and the vanishing of the market for whale oil as an illuminant, after the sinking of the first oil well in Pennsylvania in 1859. During the past ten years several large city markets (for garden truck and the like) have ceased to function, possibly because of the increase in the production of canned foodstuffs.

Verily, the old order changeth, "No man liveth unto himself alone." The treasures of our well-stocked national coal-cellar, the priceless heritage of our national wood-lot, the fertility of our national wheat field and cotton patch, are not intended to be squandered or abused, for they are the true foundation of the future prosperity of the United States.

### North Carolina Legion Endorses Memorial Oaks Plan

At the meeting of the North Carolina American Legion, held at Asheville early in September, a resolution was passed endorsing the planting of memorial oaks along the two memorial highways in North Carolina. These are known as "Old Hickory" and "Wildcat." This action is typical of the sentiment in many states and it is timely in view of the proposed conference on memorial parkways to be held at Washington under the auspices of the American Legion and other interested bodies on November 24.

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## The New Hampshire Forestry Conference

How the McNary-Clarke Forestry Act, passed at the last session of Congress, may best serve the forestry needs of the country was one of the main subjects of discussion at the annual meeting of the Society for the Protection of New Hampshire Forests, held at Peterborough, N. H., September 1 to 3. The conference was held in co-operation with the New Hampshire Forestry Commission and the Appalachian Mountain Club and was attended by more than one hundred foresters and others interested in forestry. The sessions were held at Sargent Camp on Half Moon Pond, about two miles north of West Peterborough. Philip W. Ayres, forester for the Society, had charge of the meetings and on the third day led an excursion to the summit of Mount Monadnock. Town Forests was another major subject to which the conference devoted considerable time. Among the resolutions adopted by the Conference was one stressing the urgent need of giving full effect as soon as possible to the McNary-Clarke Act and pledging support to the American Forestry Association as the logical organization to unify nation-wide interest in seeing that the act is made to serve its highest usefulness.

## Proposed Amendment Vital To Wisconsin Forests

At the November election, Wisconsin voters will be called upon to approve an amendment to the state constitution providing "that the state may appropriate moneys for the purpose of acquiring, preserving, and developing the forests of the state, but there shall not be appropriated under authority of this section in any one year an amount to exceed two-tenths of one mill of the taxable property of the state as determined by the last preceding assessment."

At present the constitution provides that "the state shall never contract any debt for works of internal improvement, or be a party in carrying on such works." The only amendment changing this provision was passed in 1908 to provide for construction or improvement of public highways.

It was early recognized by friends of conservation in Wisconsin that state forestry in its broader aspects was fatally within the internal improvement classification and that as such there was a distinct obstacle in the way of direct state action. Accordingly, after being twice considered in the legislature, an amendment similar to the one now offered was voted on favorably by the people in 1910. Unfortunately, certain details of the passage of this amendment were illegal and it became inoperative.

There is keen interest in the coming vote because of the undisputed place which forests occupy in any program of successful and well-balanced land development. The problem is one which threatens the very prosperity of Wisconsin. It will not be solved without state action, and from all indications the citizens of the state are ready to remove the present obstacle in their fundamental law when they go to the polls in November.

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# AROUND THE STATES

## **McNARY-CLARKE LAW SUGGESTS AMENDMENT TO CALIFORNIA STATE CONSTITUTION**

An attempt to harmonize the state constitution of California with the McNary-Clarke Law will be made by vote on an amendment in the coming election. California already has a clause in her constitution exempting from taxation fruit- and nut-bearing trees under the age of four years from the time of planting in orchard form and grapevines under the age of three years from the time of planting in vineyard. It is now proposed to include in the same section a provision exempting from taxation "young forest growth mentioned in accordance with statutes enacted by the state legislature." Young forest growth is referred to later in the amendment as "immature forest growth." The outcome of the vote on this amendment will be watched with interest by other states.

## **SOUTH CAROLINA PROPOSES FORESTRY DEPARTMENT**

An important conference was held at Columbia, South Carolina, late in August to consider methods of financing a state forestry department. The conference was called by James Henry Rice, Jr., of Wiggins, South Carolina, and was attended by representatives of the lumber interests of the state, the agricultural interests, the United States Forest Service, the press, and the American Forestry Association. There was complete agreement in the conference that a department of forestry was desirable, and the following constructive resolution was adopted unanimously:

"Resolved, That a committee be appointed to confer with the South Carolina State Tax Commission to invoke its approval and co-operation to secure the passage of a general severance tax bill applicable to all forest products, this to be in lieu of the taxes now paid on timber leases; or of a severance tax bill on all forest products, eliminating therefrom those who are now paying the timber lease tax; in either event from this tax a

sufficient sum to be appropriated to support a South Carolina Forestry Department.

"And that this committee be empowered to draw up a bill embodying the plan of taxation agreed upon and providing for the creation of a South Carolina Forestry Department, to be presented to the General Assembly of South Carolina at its next session."

## **COMMITTEE APPOINTED UNDER THE TERMS OF THE RESOLUTION**

James Henry Rice, Jr., of Wiggins.  
F. G. Davies, of the A. C. Tuxbury Lumber Co., Charleston.  
V. G. Watters, of the Savannah River Lumber Co., Savannah, Ga., but with large holdings in South Carolina.  
H. L. Tilghman, of the Tilghman Lumber Co., Sellers, and president of the South Carolina Forestry Association.  
R. L. Montague, lumberman, of Charleston.

The Conservation Society of South Carolina, of which Mr. Rice is the field representative, plans to secure the co-operation of all interested bodies in working for the proposed legislation.

The way has been prepared somewhat by efforts to put through the forestry bill in the last legislature.

## **GEORGIA FAILS TO PASS FORESTRY LAW**

Both of the forestry bills before the Georgia State Legislature at the session just closed failed of passage. The forestry contract law, affecting the taxation of forest lands, passed the Senate, but got no further. The Rountree-Haddock Bill, which was favorably reported by the committee, failed to secure consideration because of the volume of other legislation. The latter bill provided for a state forestry department and a fire-protection system. Much of the opposition is said to have come from the small mill owners in the state. It is understood that an attempt will be made during the next legislature to pass bills practically identical

with those which were defeated. Present legislative attempts have had great educational value.

## **COMMITTEE INVESTIGATES KAIBAB DEER HERD**

The committee appointed by Secretary Wallace, of the U. S. Department of Agriculture, assembled on the Kaibab Plateau, in northern Arizona, on July 15 and spent two weeks looking into the question of what should be done about the too rapid increase of the protected Kaibab deer herd for the capacity of the limited range. The committee consists of Chairman John B. Burnham, President of the American Game Protective and Propagation Association; T. Gilbert Pearson, of the National Association Audubon Societies; Heyward Cutting, of the Boone and Crockett Club; T. W. Tomlinson, Secretary of the National Livestock Association; Will Dilg, President of the Izaak Walton League; and Hal G. Evarts, nationally known sportsman and writer.

It is understood that all members of the committee were at the meeting except Mr. Dilg, who was detained at the last moment.

Their report is expected by the Secretary of Agriculture sometime in October.

## **KENTUCKY MARKS TIME IN FORESTRY**

Despite an act of the 1924 General Assembly creating the office of State Forester, the office was still vacant as late as August 21.

Clell Coleman, Commissioner of Agriculture, June 11 appointed William E. Jackson, of Fayette County, to the office. Gov. W. J. Fields never has confirmed the appointment, although the position has been vacant more than two months. Work of the department, without an experienced director, was at a standstill, according to officials in the office of the Commissioner of Agriculture. Mr. Coleman said he submitted recommendations to the Governor on behalf of Jackson several weeks ago.



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### MASSACHUSETTS FARMERS MEET IN HARVARD FOREST

The growing interest of our farm woodlot owners in forestry, especially as the science is applied to increasing the productivity of their woodlands, was well exemplified in Worcester County, Massachusetts, when the County Farm Bureau, on August 21, held its annual outing and picnic in the Harvard Forest, Petersham. The picnic was attended by nearly one thousand persons, and several hundred accompanied Prof. R. T.

Fisher and his assistants in an excursion through the woods, where they were shown plantations, thinning plots, and improvement cuttings.

At the Massachusetts meeting, after lunch, held on the shore of a small lake in a beautiful grove, they were addressed by Prof. Fisher, Mr. Cook, Chief Forester of the Conservation Department, and a Mr. Buckingham, of the Connecticut Farm Bureau.

### VERMONT ESTABLISHES FREE CAMP SITES

Three free tourist camp sites have been established on Vermont State Forests, according to an announcement of Commissioner of Forestry, Robert M. Ross. These camps are located on the West River State Forest, in Townshend; the Proctor-Piper State Forest, in Cavendish, and the Mansfield State Forest, in the town of Stowe.

The sites are all accessible from the main highways and will be a great convenience to "camping tourists" visiting Vermont. Fireplaces have been constructed and sufficient land cleared to accommodate several camps at each site. Excellent water is available from the clear brooks of the Green Mountains, and while the sites are near enough to the main highways to be readily accessible, they are also far enough away to insure a rest from the hum of motors.

Not only will these camps be of service to campers, but it is believed they will also prove of considerable value to the state forest-fire prevention organization by tending to consolidate camp fires in these areas. It would be the exceptional "tourist campers" who would rather build his camp fire near a slashing or other hazardous place than build it where he has available a good, safe fireplace, plenty of wood, and excellent drinking water.

### NEW STATE FOREST FOR OREGON

In spite of the fact that Oregon contains more standing timber than any other state in the Union, the estimate being four hundred billion board feet, covering one-third the area of the state, still she has only one state forest of the somewhat insignificant acreage of eight hundred acres. However, it appears that through the efforts of State Forester, F. A. Elliott, the state will soon acquire a block of forest land comprising about 70,000 acres which will be designated and administered as a state forest. This is made possible through an exchange with the Federal Forest Service of isolated tracts of school land scattered throughout the national forests of the state.

Cruising of the state lands was started in the fall of 1920 and completed late the following year. The tract selected for exchange is National Forest land lying in the Douglas fir region in Coos and Douglas Counties with the Umpqua River as its Northern boundary. This tract has also been cruised and details of the exchange worked out. All that is left to complete the deal is the approval of the state land board. The members of this board are to make an investigation of the land early in September, and it is fully expected that their official sanction of the exchange will be given later in the month.



### STATE FOREST IN CONNECTICUT ENLARGED AND RENAMED

The Cornwall State Forest has been extended down toward the Housatonic River by the purchase, during the past year, of 524 acres, making the total area 1,806 acres. Following the policy already adopted, of giving the forests Indian names so far as possible, this will hereafter be called the Housatonic Forest.

### COMMITTEE URGES CO-OPERATION OF ALL LUMBERMEN

In report from the Forestry Committee, for Mr. George S. Long, chairman, Mr. E. T. Allen presented the following resolution at the meeting, July 30, of the directors of the National Lumber Manufacturers' Association. The resolution was approved unanimously by vote of the directors:

"Having persistently urged constructive legislation to protect and perpetuate American forests, the National Lumber Manufacturers' Association regards the McNary-Clarke Act as an outstanding achievement in the solution of great national problems. It gives the country a definite forest policy with sound objectives in protection and reforestation; also one in line with American institutions, in that it recognizes the rights, responsibilities, proprietorship, and dignity of all agencies concerned and provides for their co-operation without conflict of authority. It now lies with these agencies, of which we are one, to co-operate in the spirit the act prescribes, and so to demonstrate its wisdom, success, and adequacy.

"We, therefore, again offer our assistance and facilities to the Government and states, and particularly urge like action by lumbermen in every region, because the problems are mostly local, to help carry out the provisions of the act for promoting forest protection, reforestation, and better taxing methods, through such laws, systems, and practices as are mutually found to be most suitable for each region and state."



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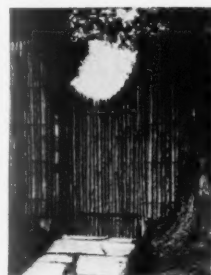
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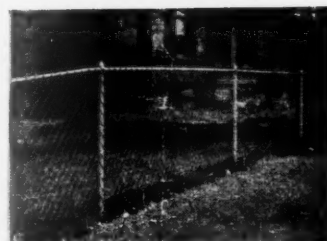


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## NEW YORK FARMERS FLOCK TO FARM FOREST

A forestry field day and picnic that was attended by state, Federal, and county officials, farmers, sportsmen, bankers, business men, and others interested in the reforestation movement was held at Pine Grove farm, the home of C. G. Du Mond, chairman of the Delaware County Forestry Committee, at Northfield, Delaware County, New York, on August 14.

Mr. Du Mond a number of years ago was convinced that the reforestation of a considerable portion of the cutting fields in his farm would be a profitable investment, and since 1914 has made nineteen plantations, aggregating 150,500 trees, consisting of white pine, Scotch pine, red pine, Norway spruce, European larch, red oak, black walnut, and hickory.

All of the plantations on the Du Mond farm are thrifty and show a healthy growth, and as an object-lesson have served to interest many farmers in the vicinity in the subject of reforestation. More than 2,000 people, mostly from Delaware, Chenango, and Otsego counties, attended the picnic and spent a profitable and enjoyable day in visiting the plantations and listening to addresses by speakers of national reputation in forestry.

From early morning until afternoon a steady stream of automobiles and carriages poured into the farm by roads from Oneonta, Sidney, Unadilla, and Walton, until more than 1,800 cars were parked by state troopers in a meadow near the grove where the picnic was held. The grove consisted of 40-year-old white pines and was pasture

land when the present owner of the farm was a boy. In the grove long tables had been arranged about a huge fireplace for the accommodation of the picnickers.

Mr. Du Mond gave a short talk on practical tree-planting on unused farm land, which was filled with illustrations furnished by his own experience in farm reforestation work. Mr. E. A. Sherman, Associate Forester of the Forest Service at Washington, spoke in place of Forester W. B. Greeley and paid a high tribute to the work of Congressman John D. Clarke in securing the passage of the Clarke-McNary Bill. G. H. Collingwood, Extension Forester of the U. S. Department of Agriculture, spoke on "Forestry Opportunities for New York Farmers," and C. R. Pettis, Superintendent of State Forests of the Conservation Commission, told how the state is helping in reforestation. Congressman John D. Clarke, the author of the Clarke-McNary Forestry Bill, told of the history of this bill in Congress and spoke of the need for hearty co-operation from all interests in what the bill hoped to accomplish. Franklin Moon, dean of the New York State College of Forestry at Syracuse University, discussed the profits from reforestation. There was community singing, led by Walter Moore, of Walton, and a solo by J. R. Simmons, Secretary-Forester of the New York State Forestry Association, and the exercises closed with a demonstration tree-planting, where all present had an opportunity to witness the most effective method of putting young forest trees in the ground.


## FRANKLIN K. LANE MEMORIAL GROVE DEDICATED

On Sunday, August 24, simple and appropriate outdoor ceremonies were held to honor the memory of Franklin K. Lane, former Secretary of the Interior and first president of the Save the Redwoods League. On this occasion public officials and other friends and admirers of Mr. Lane, headed by E. E. Ayer, of Chicago, a council of the League, dedicated a two-hundred-acre grove at Kettin Telbe, Humboldt County, California. This grove is one of the finest tracts of timber in the Redwood belt, and it contains some of the largest and most symmetrical specimens of the trees, many of them close to two thousand years old. A further fund for the purchase of additional area and for the improvement and upkeep of the grove and the public camp ground in conjunction with it will be raised as a part of the program of the Save the Redwoods League. The area has been deeded to the State of California to stand as a part of the Humboldt State Redwood Park.

Kettin Telbe is the old Indian name of the place known for years as Phillipsville. It is two hundred and twenty-eight and six-tenths miles north of Sausalito and sixty-five miles south of Eureka, bordering the south fork of Eel River.

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THE GIANT CACTUS, OR SAGUARO (*CARNEGIEA GIGANTEA*), IS THE STATE FLOWER OF ARIZONA. MRS. MERTICE M. C. BUCK KNOX, WHO SENT US THIS PICTURE, SAYS: "I DON'T KNOW WHETHER YOU COULD CALL THE SAGUARO A TREE, BUT IT CONSISTS OF RODS OF WOOD, AS TOUGH AS OAK, USED, AS LONG AGO AS 2,000 YEARS, FOR COVERING ROOFS. IT WAS IN USE WHEN THE CASA GRANDE RUIN WAS BUILT"

#### EXACTING TEST FENCE FOR WOOD PAINTING STUDY

This test fence is being erected by the Forest Products Laboratory at Madison, Wisconsin, to show which of the woods commonly used in outside construction will take and hold paint satisfactorily, which are difficult to paint, and how painting difficulties may be overcome. Nine other test fences are being put up in the various climatic regions of the United States.

As the study undertaken is not for the purpose of comparing various paint mixtures, two paints only have been used. One of these is a Dutch process white lead in oil and the other a white lead, zinc oxide, and asbestos, mixed pigment paint which is believed to be representative of a large amount of the high-grade "ready mixed" paints on the market.

A flat-grain panel and an edge-grain panel of each kind of wood are coated with each kind of paint. Three coats of the paints are applied. The row of tilted panels at the top of the fence is for the purpose of comparing weathering of paint on an inclined surface with weathering on the vertical surfaces.

Horizontal drain strips between panels serve to keep the pigment of the upper panels from washing across the lower ones.

#### BIG GAME ON THE NATIONAL FORESTS

A recent statement from the United States Forest Service gives the following estimates of big game on the national forests:


Antelope ----	4,647	Moose ----	7,961
Buffalo ----	157	Mountain	
Caribou ----	47	goats ----	18,105
Deer -----	511,238	Mountain	
Elk -----	49,540	sheep ----	12,933

No figures are given for bear.

It is interesting to note the distribution of these big-game animals by states. Arizona leads in the number of antelope, at 1,279. New Mexico is estimated to have 770 antelope and they are found in nine other states. Oklahoma has most of the buffalo. Caribou are only in Minnesota and Montana. California leads with 187,610 deer. Oregon and Montana are close seconds, with around 50,000 each; Wyoming leads in the number of elk, with 15,488, a decrease of about 5,000 since 1921. Alaska has more than half the total number of moose and Wyoming the remainder of them. Alaska also has 10,000 mountain goats. This animal is also found in Idaho, Montana, and Washington. There are almost 6,000 mountain sheep in Colorado and a few over 2,000 in Wyoming. They are also found in smaller numbers in Alaska, Arizona, California, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, and Washington.

#### HENRY TRYON GOES TO SOUTH CAROLINA

Henry H. Tryon, who for the past five years has been with the Lumberman's Bureau of Washington, D. C., and with the James W. Sewall Timber Engineering organization, takes up his work with Clemson College of South Carolina as Extension Specialist in Forestry early in September. His headquarters will be at Aiken. Mr. Tryon is a graduate of Harvard Forest School and his experience, especially in the Atlantic Coast States, has been wide and varied. The demand for advice and help from owners of forest lands in South Carolina is urgent, and Mr. Tryon's work will be of tremendous value in the campaign for a state forest policy for South Carolina.



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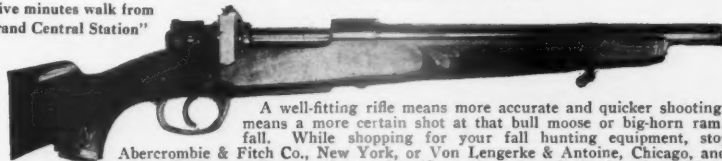
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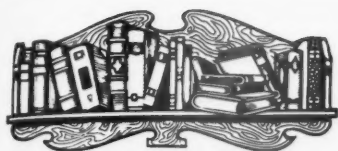
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## BOOK REVIEWS

**SONGS AND BALLADS OF THE MAINE LUMBERJACKS.** Collected and edited by Roland P. Gray. Cambridge, Harvard University Press. Price, \$2.50 net.

Since the type of lumberjack of fifty years ago is rapidly passing and since folklore and popular ballads are their great human documents, Professor Gray has sought to preserve representative examples of these songs of the Maine lumberjacks, narrating the experiences of individuals and groups. They have been brought together in one volume and the author has added what can be ascertained about their history and origin.

**MANUAL OF TREES AND SHRUB INSECTS.** Ephraim Porter Felt. The Macmillan Company, New York City. Price, \$3.50.

This book provides a practical summary of the insect problem. The author advocates anticipating injury by destructive insects, rather than attempting restorative measures after the tree has been injured. Natural checks and methods of control are specified, and full descriptions of the insects given to aid in identification of species and groups. The depredation of the various insects is outlined through a succession of active stages to the adult. The book concludes with a systematic account of insects in general, detailing their characteristics and habits, the information being presented so that it is available for ready reference. The chapters are illustrated in a manner which will make it a useful handbook and an invaluable aid in identifying the common insects attacking shade and forest trees, shrubs, and woody ornamentals.

**THE TREES AND SHRUBS OF YELLOWSTONE PARK.** By Pliny Haine Hawkins, M. S. \$1.00 postpaid.

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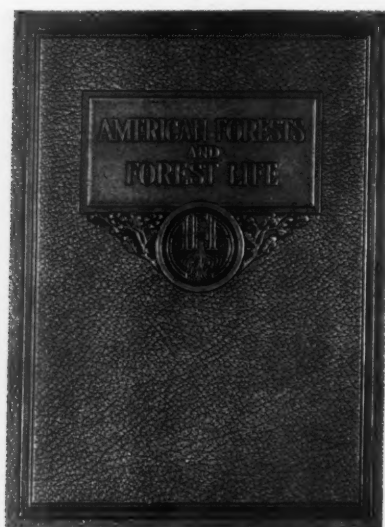
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